Schneider AUDIO

Serviceanweisung
Service manual

Ident-Nr. 49619
Ident-Nr. 49560

MIDI 2264
MIDI 2270

Diese Service-Unterlage wurde ausschließlich für autorisiertes Fachpersonal erstellt.
Für Eingriffe durch nicht autorisierte Personen übernimmt SCHNEIDER keine Haftung.

This service-manual was only made for authorized specialists.
For interventions by not authorized persons SCHNEIDER don't take possession of liability.

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WICHTIGER HINWEIS

Der integrierte CD-Spieler arbeitet mit unsichtbarem Laserlicht.

Nicht in den Strahl blicken und nicht dem Strahl aussetzen!

Vorsicht, Laserstrahlung im Inneren des Gerätes!

Zur Vermeidung von Strahlungsschäden darf das Gehäuse nur von qualifiziertem Fachpersonal geöffnet werden.

Informationsetikett auf der Geräterückseite (siehe Bild).

The integrated CD-Player works with invisible laser-light.

Do not look into this beam and don't abandon yourself to radiation.

Attention, laser-radiation also inside of the unit!

To avoid damages of radiation unit should be opened only by qualified service personnel.

Information label on the rear of unit (see picture).

ADVARSEL!

Usynlig laserstrålning ved åbning når sikkerheds afbrydere er ude af funktion. Undgå udsaettelse for strålning.

VAROITUS!

Suojakoteloa ei saa avata. Laite sisältää laserdiodin, joda lähettää näkymäntöntä silmille vaarallista lasersäteilyä.

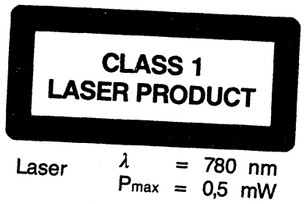
VARNING!

Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen!

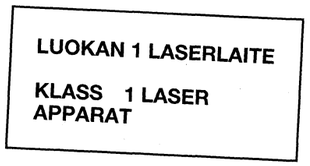
VARO!

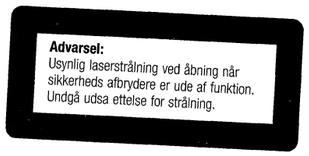
Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

Warnetikett in dem Plattenfach (siehe Bild).



Warning label in record-drawer (see picture).



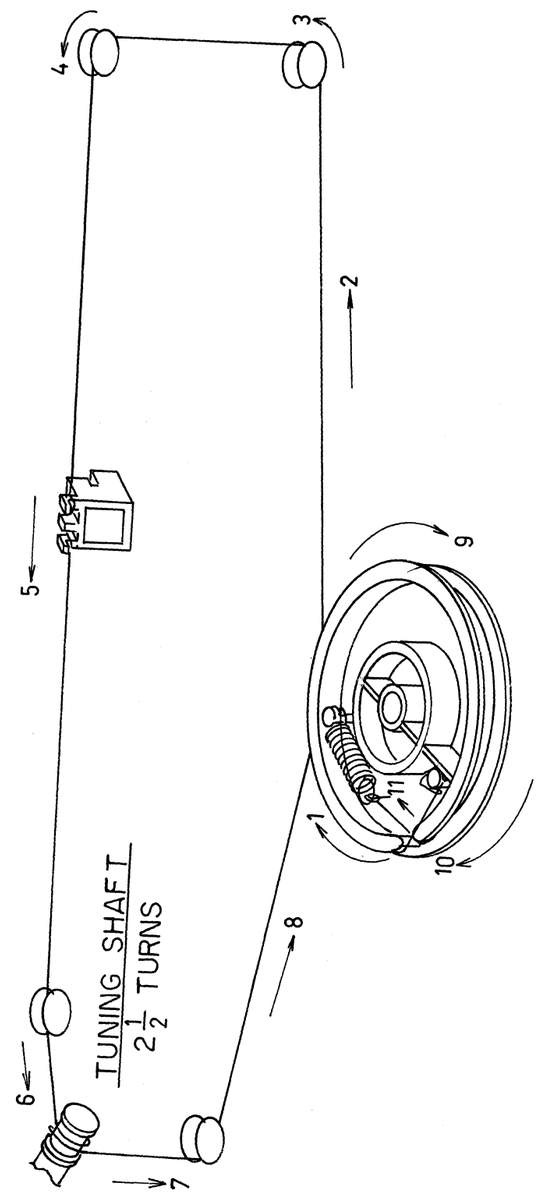

Advarsel:
Usynlig laserstrålning ved åbning når
sikkerheds afbrydere er ude af funktion.
Undgå udsa ettelse for strålning.

Austrittsöffnung für Laserstrahlung
Discharge orifice for Laser radiation

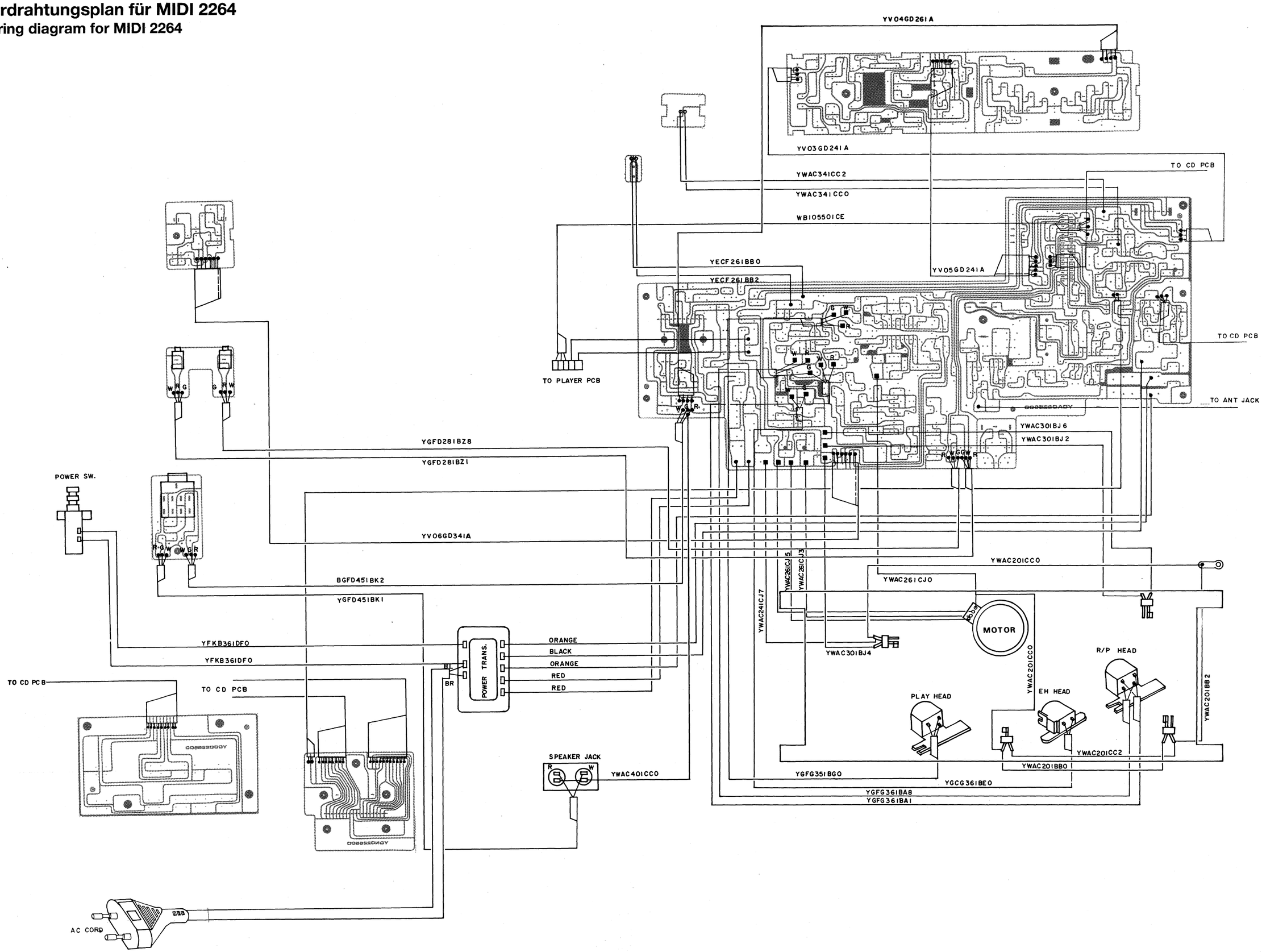
Hinweis für Original-Etikett:
Schrift und Umrandung schwarz, Untergrund gelb.

Indication for original label:
Letters and surrounding black, background yellow.

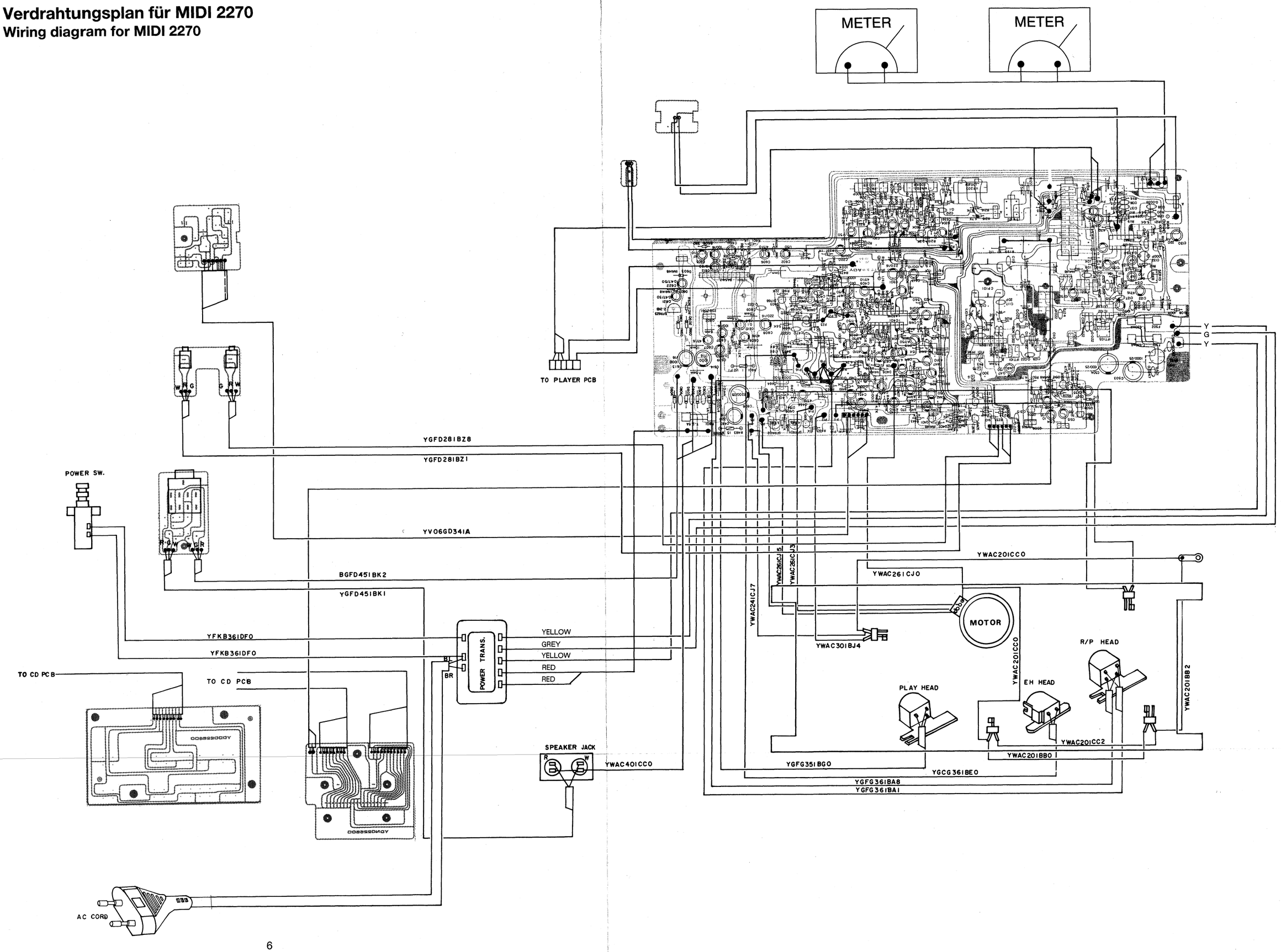
Seillaufplan für MIDI 2264/2270
Dial cord stringing diagram for MIDI 2264/2270



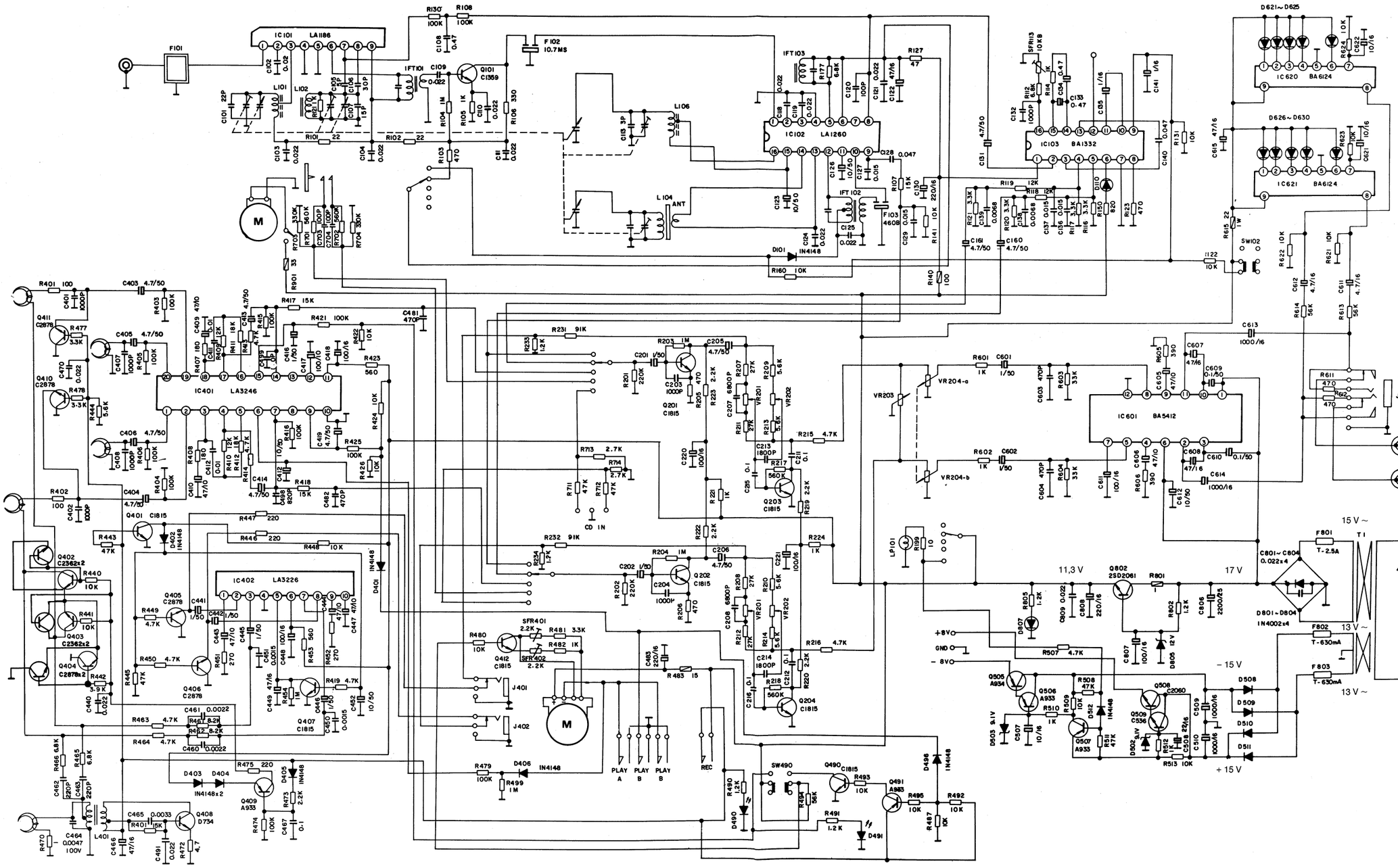
Verdrahtungsplan für MIDI 2264
Wiring diagram for MIDI 2264

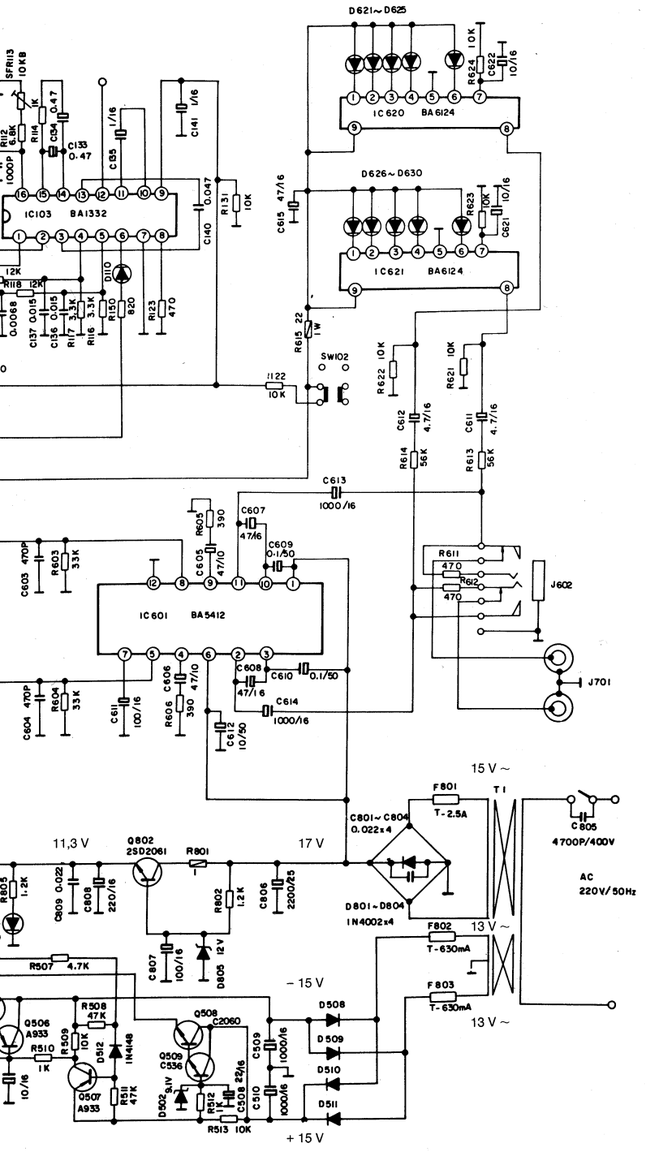


Verdrahtungsplan für MIDI 2270
Wiring diagram for MIDI 2270



Schaltbild 1 MIDI 2264
Schematic diagram 1 MIDI 2264



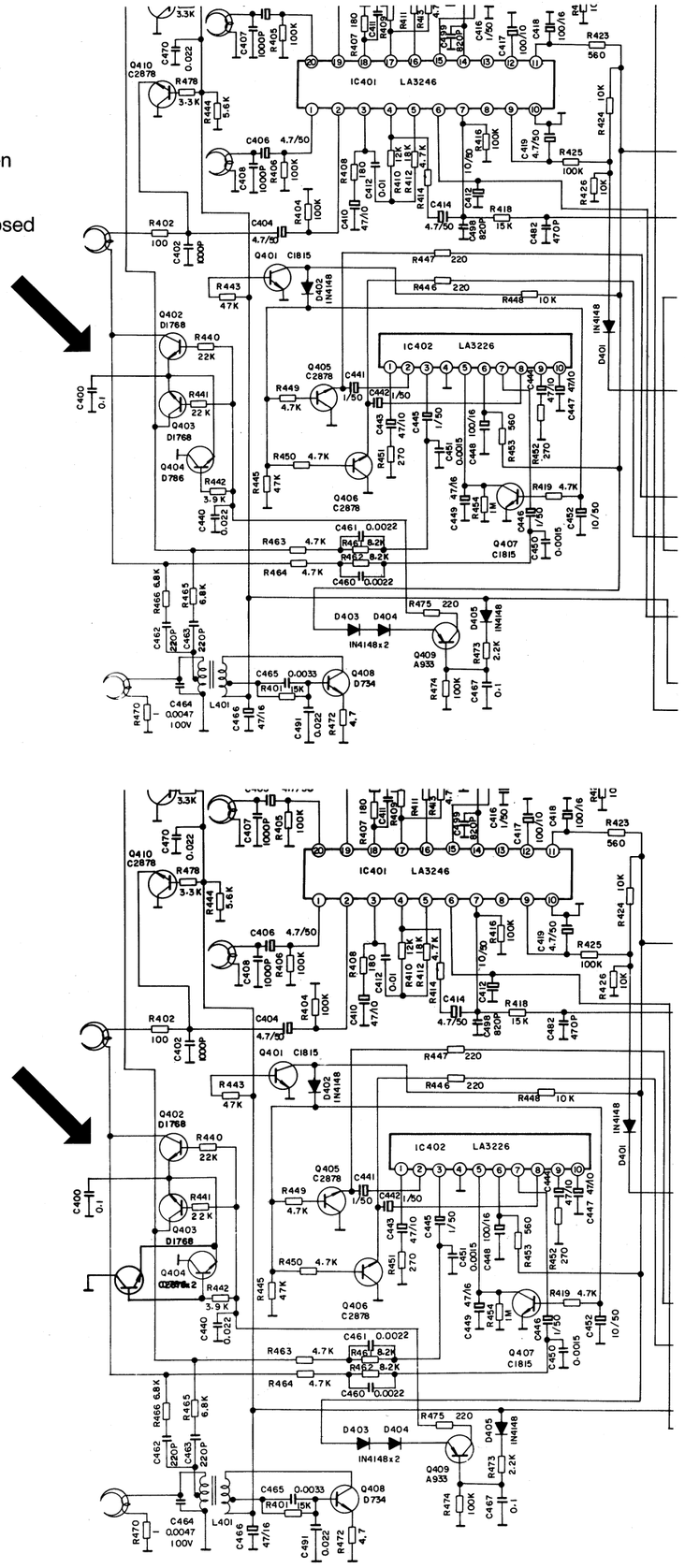


Schaltbild 2 MIDI 2264 (Auszug Cassette)

Schematic diagram 2 (Excerpt cassette)

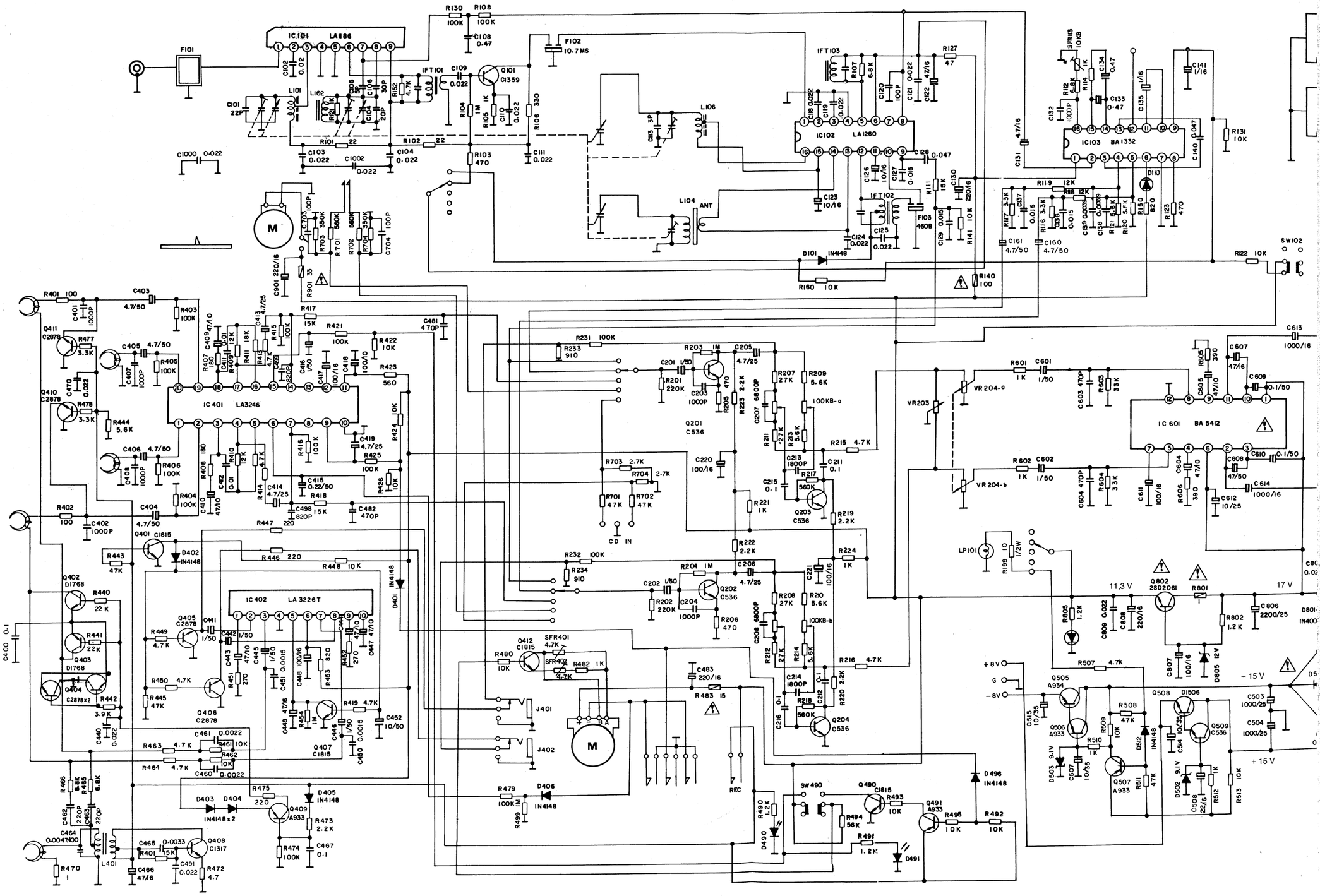
Änderungshinweis: Anhand der vorliegenden Schaltpläne Version nachprüfen!

Modification advice: By means of the proposed schematic diagrams verify your version!



Schaltbild 1 MIDI 2270
Schematic diagram 1 MIDI 2270

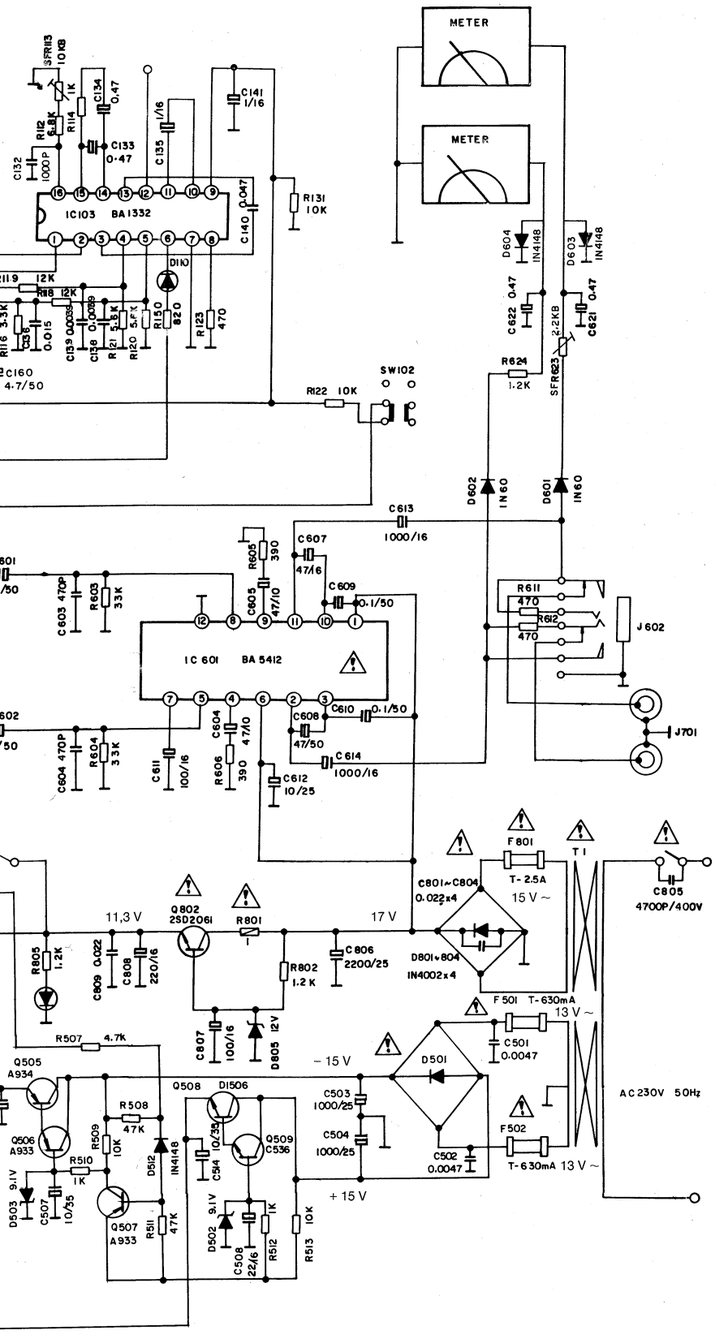
Schaltbild 1 MIDI 2270
Schematic diagram 1 MIDI 2270

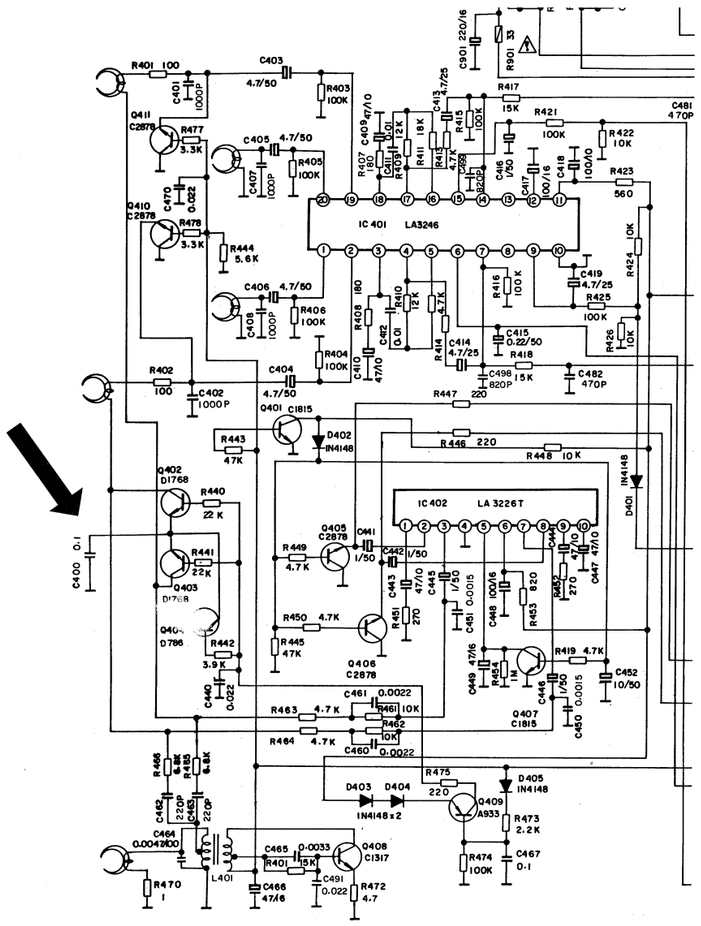


Schaltbild 2 MIDI 2270 (Auszug Cassette)
Schematic diagram 2 MIDI 2270 (excerpt cassette)

Änderungshinweis: Anhand der vorliegenden Schaltpläne Version nachprüfen!

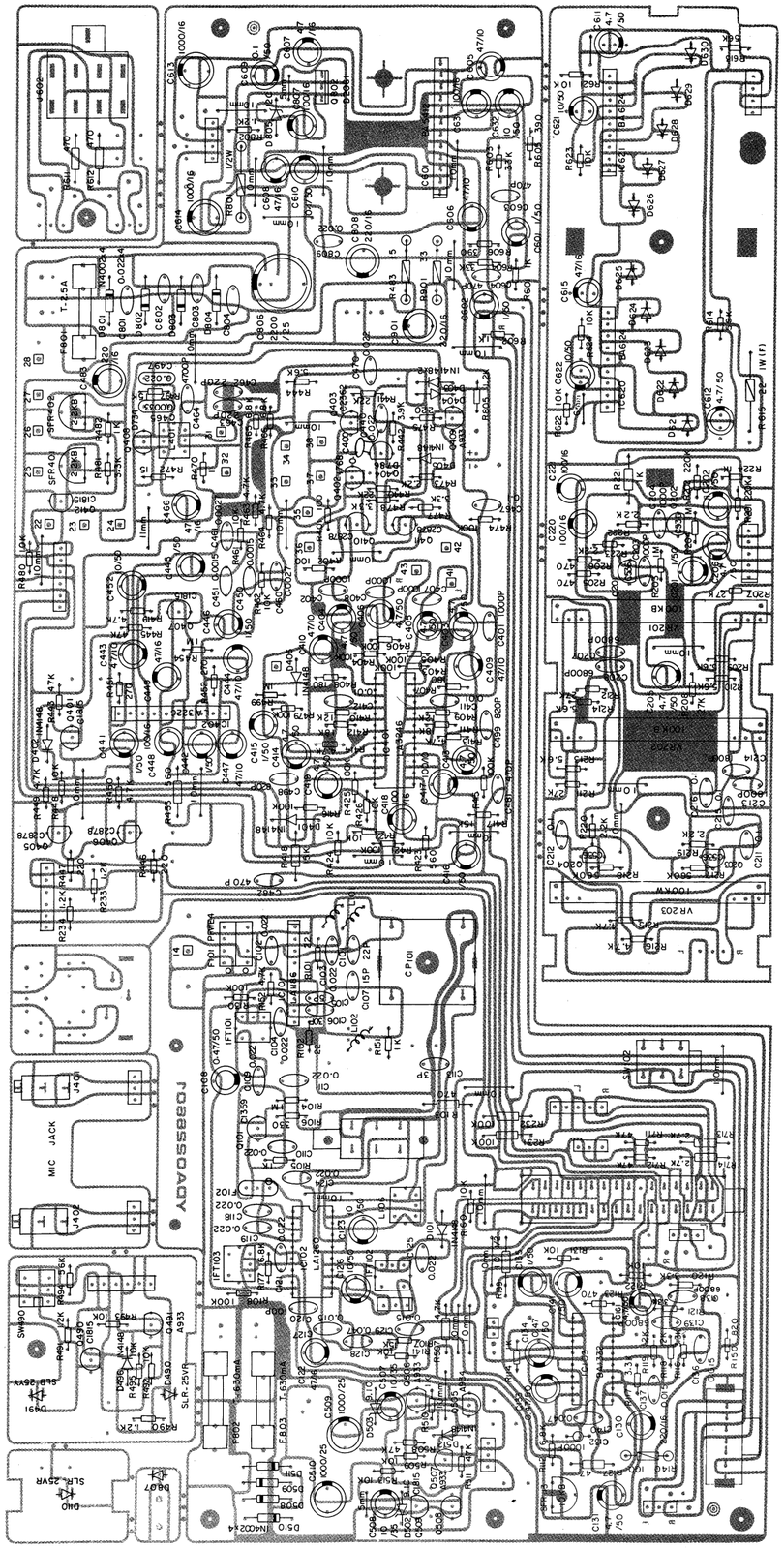
Modification advice: By means of the proposed schematic diagrams verify your version!





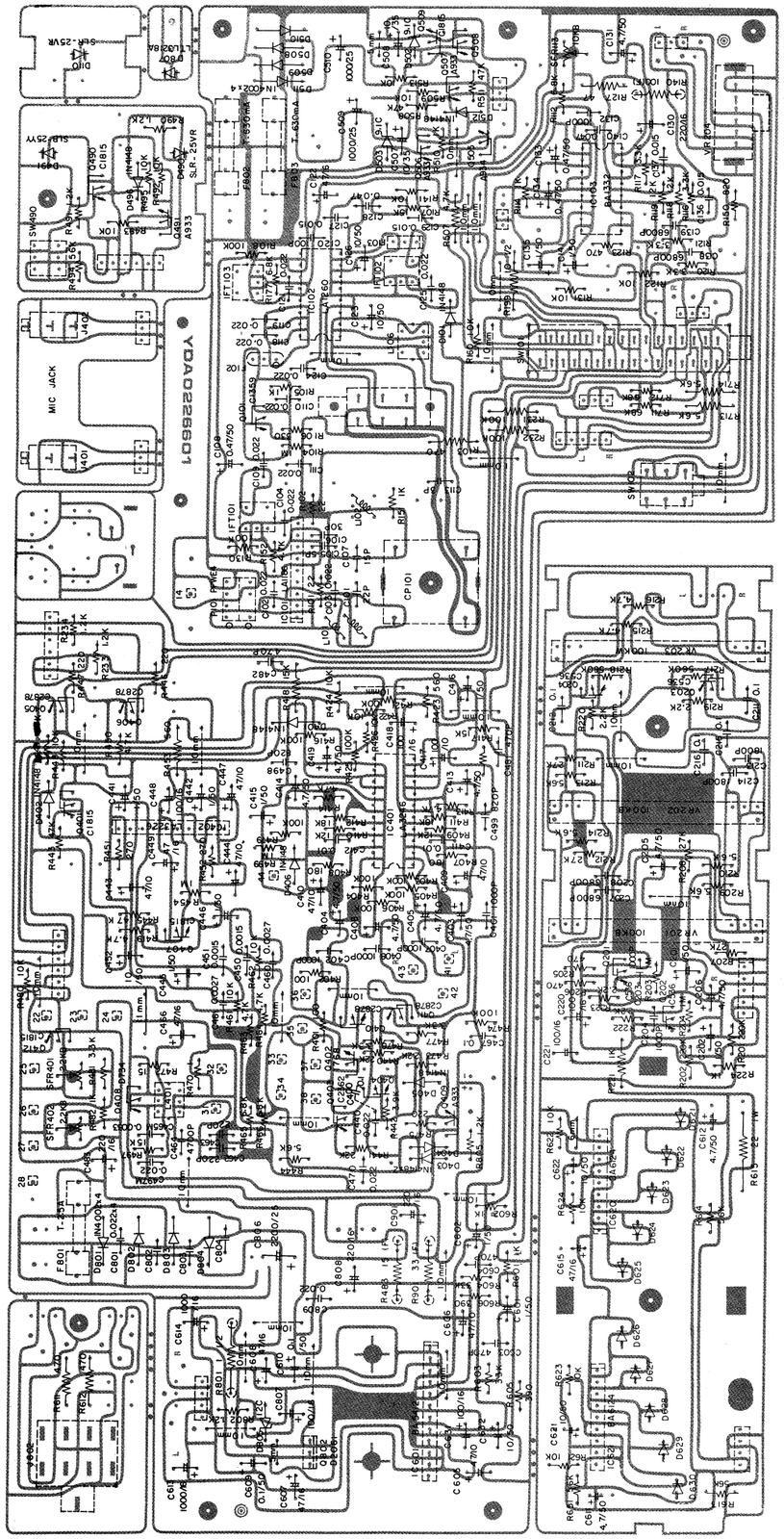
Platinendarstellung Hauptplatine + LED-Platine MIDI 2264
Main P.C.B. + LED P.C.B. MIDI 2264

Bestückungsseite/
Top view



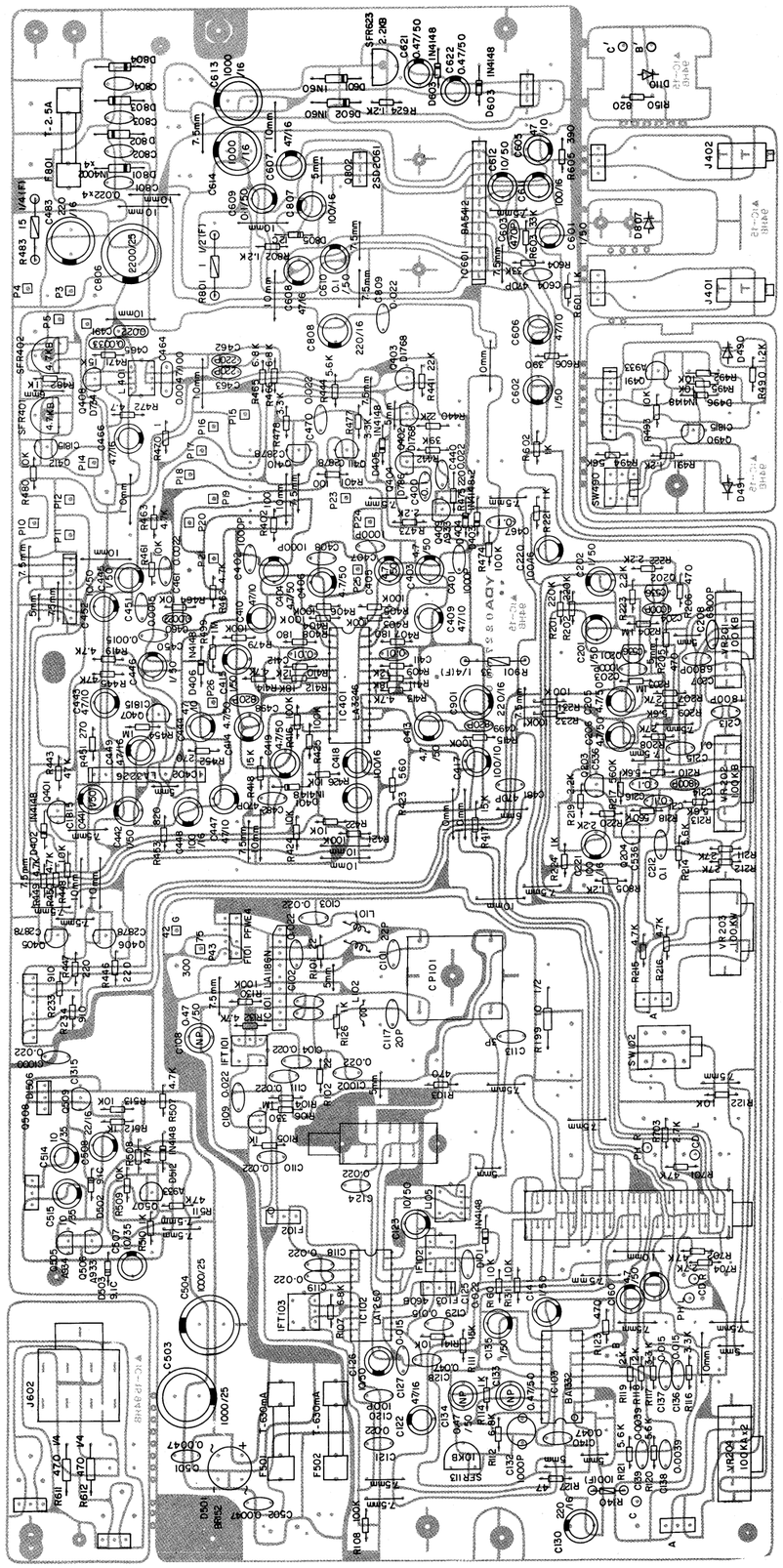
Platinendarstellung Hauptplatine + LED-Platine MIDI 2264
Main P.C.B. + LED P.C.B. MIDI 2264

Leiterbahnseite/
Bottom view



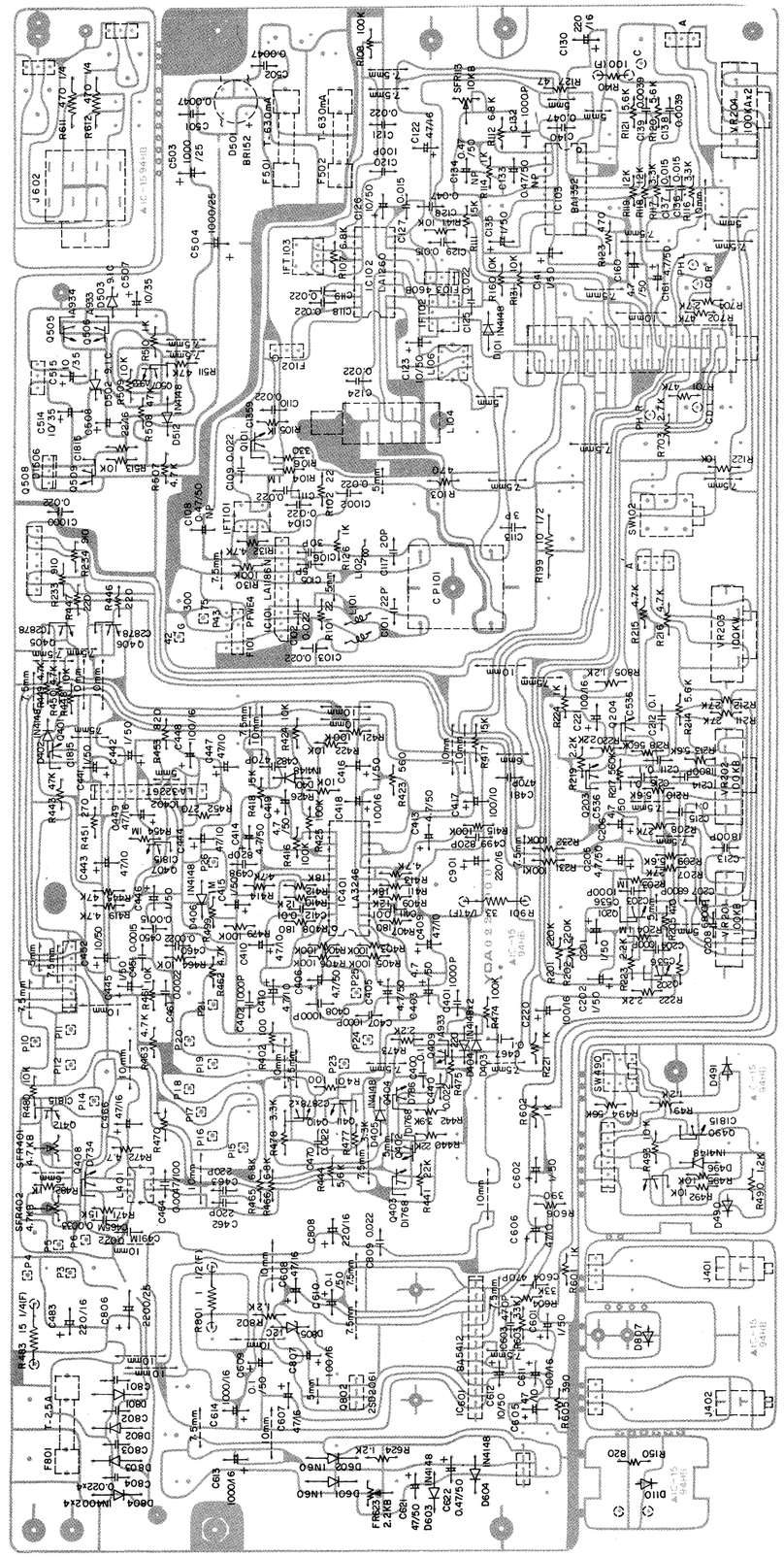
Platinendarstellung Hauptplatine MIDI 2270
Main P.C.B. MIDI 2270

Bestückungsseite/
Top view



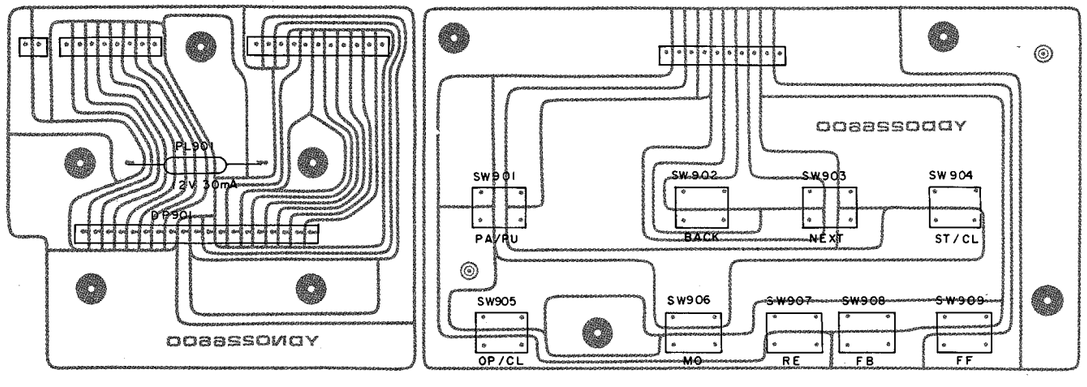
Platinendarstellung Hauptplatine MIDI 2270
Main P.C.B. MIDI 2270

Leiterbahnseite/
Bottom view

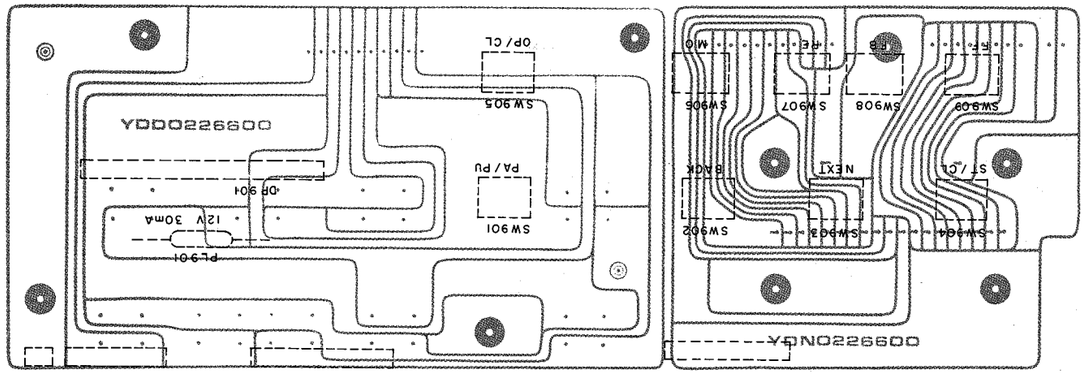


Platinendarstellung LCD-Anzeige CD MIDI 2264/2270
LCD CD P.C.B. MIDI 2264/2270

Bestückungsseite/Top view



Leiterbahnseite/Bottom view



Ersatzteilliste elektrische Teile MIDI 2264
Spare parts list electrical parts MIDI 2264

Bestell-Nr./ Part.-No.	Bezeichnung	Description	Position	Preisgruppe/ Price-key
65 479 00	Hauptplatine	Main P.C.B.		F 7
65 480 00	LCD-Platine	LCD P.C.B. assembly		C 8
65 481 00	Schalter Platine, CD	CD SW P.C.B. assembly		B 7
65 482 00	Phono Platine	Phono P.C.B. assembly		A 7
66 049 00	LED Platine (Power Meter)	LED P.C.B.		C 5
40 246 00	IC LA 1186 N	IC LA 1186 N	IC 101	B 0
26 787 00	IC LA 1260	IC LA 1260	IC 102	B 4
26 473 00	IC BA 1332	IC BA 1332	IC 103	B 2
40 799 00	IC LA 3246	IC LA 3246	IC 401	B 2
40 037 00	IC LA 3226 T	IC LA 3226 T	IC 402	B 2
65 760 00	IC BA 5412	IC BA 5412	IC 601	B 4
14 351 00	IC BA 6124	IC BA 6124	IC 620–621	B 3
12 093 00	Transistor 2SC 1359 B	Transistor 2SC 1359 B	Q 101	A 3
13 545 00	Transistor 2SC 536 FS	Transistor 2SC 536 FS	Q 201–204	A 3
12 947 00	Transistor 2SC 1815 GR	Transistor 2SC 1815 GR	Q 401+412	A 4
65 701 00	Transistor 2SD 1768 S	Transistor 2SD 1768 S	Q 402–403	B 5
65 762 00	Transistor 2SD 786 S	Transistor 2SD 786 S	Q 404	A 3
65 784 00	Transistor 2SD 734 F	Transistor 2SD 734 F	Q 408	A 2
48 839 00	Transistor 2SA 933SS	Transistor 2SA 933SS	Q 409	A 1
34 691 00	Transistor 2SC 2878 A	Transistor 2SC 2878 A	Q 410+411	A 3
48 841 00	Transistor 2SD 2061 F	Transistor 2SD 2061 F	Q 802	A 6
11 239 00	Diode 1N 4002	Diode 1N 4002	D 801–804	A 1
01 241 00	Diode 1N 4148	Diode 1N 4148	D 101+401+404+406	A 2
06 227 00	Zenerdiode MTZ 12	Zener diode MTZ 12	D 805	A 3
65 763 00	Leuchtdiode rot	LED 25 VR (red)	D 110–490+621–630	A 3
65 764 00	Leuchtdiode gelb	LED 25 YY (yellow)	D 491	A 2
65 765 00	Drehko	PVC	CP 101	B 5
65 769 00	Spule FM HF	Coil FM RF	L 101	A 0
65 768 00	Spule FM Oszillator	Coil FM oscillator	L 102	A 0
65 766 00	Ferritantenne	MW bar antenna coil	L 104	B 1
65 785 00	Spule MW Oszillator	Coil MW oscillator	L 106	A 3
34 325 00	Spule Tape Oszillator	Coil tape oscillator	L 401	A 5
13 531 00	Filter FM PFWE 4	FM Balium filter PFWE 4	F 101	A 7
22 965 00	Keramikfilter FM SFE 10,7 MA 5	FM ceramic filter SFE 10.7	F 102	B 1
13 673 00	Spule AM CF (Trägerfrequenz)	Coil AM CF	F 103	B 1
46 880 00	Spule MW ZF (Übertrager)	Coil MW IFT	IF 102	A 5
65 786 00	Spule FM ZF (Übertrager)	Coil FM IFT	IFT 101	A 3
65 787 00	Spule FM DET	Coil FM DET	IFT 103	A 3
66 234 00	Schiebewi Bass/Treble	Slide resistor	VR 201/202	A 4
65 770 00	Schiebewi 100 kOhm W × 1 Balance	Slide resistor 100 kOhm W × 1	VR 203	A 7
65 771 00	Drehwi 100 kOhm A × 2 Volume	Rotary resistor 100 kOhm A × 2	VR 204	A 9
37 442 00	Trimmpoti 10 kOhm	Semi-fixed-resistor 10 kOhm	SFR 113	A 2
65 448 00	Drehschalter Funktion	Rotary switch function	SW 101	B 5
65 447 00	Druckschalter M/S	Push switch M/S	SW 102	A 7
29 047 00	Druckschalter Hi-Speed	Push switch hi-speed		B 0
34 330 00	Netzschalter	Power switch		B 0
32 952 00	Chinch-Buchsen (2)	2-pin RCA Jack		A 6
65 450 00	Mikrofon-Buchsen (2)	Mic jack		A 3
13 986 00	Kopfhörer-Buchse	Head jack		B 0
65 485 00	Netztrafo MIDI 2264/2270	Power transformer		C 9

Ersatzteilliste elektrische Teile Midi 2270
Spare parts list electrical parts Midi 2270

Bestell-Nr./ Part.-No.	Bezeichnung	Description	Position	Preisgruppe/ Price-key
65 833 00	Hauptplatine	Main P.C.B.		F 7
65 480 00	LCD-Platine	LCD P.C.B.		C 8
65 481 00	Schalter Platine, CD	CD SW P.C.B. assembly		B 7
65 482 00	Phono Platine	Phono P.C.B. assembly		A 7
40 246 00	IC LA 1186 N	IC LA 1186 N	IC 101	B 0
26 797 00	IC LA 1260	IC LA 1260	IC 102	B 4
26 473 00	IC BA 1332	IC BA 1332	IC 103	B 2
40 799 00	IC LA 3246	IC LA 3246	IC 401	B 2
40 037 00	IC LA 3226 T	IC LA 3226 T	IC 402	B 2
65 760 00	IC BA 5412	IC BA 5412	IC 601	B 4
12 093 00	Transistor 2SC 1359 B	Transistor 2SC 1359 B	Q 101	A 3
13 545 00	Transistor 2SC 536 FS	Transistor 2SC 536 FS	Q 201–204	A 3
12 947 00	Transistor 2SC 1815 GR	Transistor 2SC 1815 GR	Q 401+412	A 4
65 761 00	Transistor 2SD 1768 S	Transistor 2SD 1768 S	Q 402+403	A 3
65 762 00	Transistor 2SD 786 S	Transistor 2SD 786 S	Q 404	A 3
65 784 00	Transistor 2SC 734 F	Transistor 2SC 734 F	Q 408	A 2
48 839 00	Transistor 2SA 933 SS	Transistor 2SA 933 SS	Q 409	A 1
34 691 00	Transistor 2SC 2878 A	Transistor 2SC 2878 A	Q 405/406/410/411	A 3
48 841 00	Transistor 2SD 2061 F	Transistor 2SD 2061 F	Q 802	A 6
01 241 00	Diode 1N 4148	Diode 4148	D 101, 402–406	A 2
65 807 00	Diode 1N 60	Diode 1N 60	D 601+602	A 2
11 239 00	Diode 1N 4002	Diode 1N 4002	D 801–804	A 1
06 227 00	Zenerdiode MTZ 12 C	Zener diode MTZ 12 C	D 805	A 3
23 214 00	Zenerdiode MTZ 9,1 C	Zener diode MTZ 9.1 C	D 602+503	A 1
65 763 00	Leuchtdiode rot	LED SLR – 25 VR (red)	D 110+490	A 3
65 764 00	Leuchtdiode gelb	LED SLB – 25 YY (yellow)	D 491	A 2
65 765 00	Drehko	PVC	CP 101	B 5
65 769 00	Spule FM HF	Coil FM RF	L 101	A 0
65 768 00	Spule FM Oszillator	Coil FM oscillator	L 102	A 0
65 766 00	Ferritantenne	MW bar antenna coil	L 104	B 1
65 785 00	Spule MW Oszillator	Coil MW oscillator	L 106	A 3
34 325 00	Spule Tape Oszillator	Coil tape oscillator	L 401	A 5
13 531 00	Filter FM PFWE 4	FM Balium filter PFWE 4	F 101	A 7
22 965 00	Keramikfilter FM SFE 10,7 MA 5	FM ceramic filter SFE 10.7 MA 5	F 102	B 1
13 673 00	Spule AM CF (Trägerfrequenz)	Coil AM CF	F 103	B 1
46 880 00	Spule MW ZF (Übertrager)	Coil MW IFT	IF 102	A 5
65 786 00	Spule FM ZF (Übertrager)	Coil FM IFT	IFT 101	A 3
65 787 00	Spule FM DET	Coil FM DET	IFT 103	A 3
66 235 00	Drehwi Bass/Treble	Rotary resistor	VR 201-202	A 6
65 770 00	Drehwi Balance	Rotary resistor	VR 203	A 7
65 771 00	Drehwi Volume	Rotary resistor	VR 204	A 9
65 448 00	Drehschalter Funktion	Function Rotary SW	SW 101	B 5
65 447 00	Druckschalter M/S	Push switch M/S	SW 102	A 7
29 047 00	Druckschalter Hi-Speed	Push SW hi-speed	SW 490	B 0
34 330 00	Netzschalter	Power switch		B 0
65 546 00	Chinch-Buchsen (2)	2-pin RCA jack		A 7
65 450 00	Mikrofon-Buchsen (2)	Mic jack		A 3
13 986 00	Kopfhörer-Buchse	Head jack		B 0
65 485 00	Netztrafo MIDI 2264/2270	Power transformer		C 9

Abgleich Tuner MIDI 2264/2270
Alignment procedure tuner MIDI 2264/2270

GENERAL ALIGNMENT CONDITION

1. Adjust FM signal generator output to 1 mv (60dB) with MPX MODULATION 1 KHz

   Deviation = 33.75 KHz Pilot = 6 KHz

INSTRUMENTS REQUIRED

Signal source	Output indicator
* FM signal generator *	* Frequency counter *
*Stereo signal generator *	* AC minivolt meter *
	* Oscilloscope *

STEP	CONNECT SIGNAL SOURCE TO –	CONNECT OUTPUT INDICATOR TO –	SET SIGNAL	SET RADIO DIAL	ADJUST	ADJUST FOR
1	Set function selector switch on the front panel to " FM STEREO" position.					
2	FM signal generator connected to FM aerial	Frequency counter connect to MPX test point	98 MHz and modulation signal off too	98 MHz	SFR 113	19.00 KHz + / - 50 Hz

Abgleich Tuner MIDI 2264/2270
Alignment procedure tuner MIDI 2264/2270

GENERAL ALIGNMENT CONDITIONS

1.Signal input must be kept as low as possible to avoid overload and clipping.
(Use highest possible sensitivity of output indicator).

2.Signal input should be kept as low as possible to avoid A.G.C. action.
(Set output indicator to highest sensitivity).

3.Marker insertion and amplitude should not distort the oscillator and amplitude.
should not distort the oscilloscope trace.

4.Standard modulation is 400 Hz.

INSTRUMENTS REQUIRED

Signal source
*AM signal generator *
Radio sweep generator
Sweep oscilloscope

Output indicators
AC millivolt meter
Oscilloscope

STEP	CONNECT SIGNAL SOURCE TO-	CONNECT OUTPUT INDICATOR-	SET SIGNAL OR INSERT MARKER	SET RADIO DIAL TO	ADJUST	ADJUST FOR-
1.	Set function selector switch on the front panel to MW position.					
2.	Sweep generator connected to a loop or short piece fo wire placed near AM antenna	Sweep oscilloscope connected to wire pin of the C 411 or C412 and volume to maximum	see amplitude of 460 MHz	Quiet point on band near 515 KHz	IF 102	Amplitude of fillter
3.	Signal generat- or connected to a loop.	AC millivolt meter and oscilloscope connected across speaker	515KHz	Scale -0	AM OSC L 106	maximum
4.			1620 KHz	Scale - 100	OSC Trimmer CP101(C-1)	
5.			600 KHz	600 KHz	AM BAR ANT COIL L 104	
6.			1400 KHz	1400 KHz	RF Trimmer CP101(C-2)	
7.	Repeat step 3 through 6 as necessary to obtain maximum sensitivity on station.					

Abgleich Tuner MIDI 2264/2270
Alignment procedure tuner MIDI 2264/2270

GENERAL ALIGNMENT CONDITION

1.Signal input must be kept as low as possible to avoid overload clipping.
(Use highest possitivity of outpur indicator.)

2.Markers must be accurate (crystal controlled or calibrated). the 10.7 MHz marker used in each section of the FM alignment must be the same.

3.Signal input should be kept as low as possible to avoid AGC ACTION (Set output indicator to highest sensitivity.)

4.FM signal generator RF output frequency must be monitoring.

5.Standard modulation is 1KHz (40KHz).

INSTRUMENTS REQUIRED

Signal sources
FM Signal generator
Radio sweep generator
Sweep oscilloscope
Frequency counter

Output indicators
AC millivolt meter
Oscilloscope
114 KHz signal generator

STEP	CONNECT SIGNAL SOURCE TO-	CONNECT OUTPUT INDICATOR TO-	SET SIGNAL OR INSERT MARKER	SET RADIO DIAL TO	ADJUST	ADJUST FOR
1.	Set function selector switch on the front panel to "FM" position.					
2.	Radio sweep generator connect to C 106	Oscilloscope connected to wire pin of the C411 or C412 and volume VR to maximum	10.7 MHz	Quiet scale pointer on band	IF-101	Maximum gain with symmet- ical curve peaked at 10.7MHz marker
3.			10.6 10.7 10.8MHz marker		IF-102	Straightness and symmetry of "S" curve with 10.7MHz markered at zero crossover
4.	Repeat Steps 2 through 3 as necessary to obtain maximum gain and selectivity.					
5.	FM signal gene- rotor output soupled to FM serial. Steps 5.6 Frequency must be monitored by frequency counter	AC millivolt meter and osci- lloscope coune- cted across loadspeaker socket	87.35 MHz	Scale -0	L 102	maximum
6.			108.25MHz	Scale-10	OSC Trimmer FC -1	
7.			90MHz	90 MHz	L 101	
8.			106 MHz	106 MHz	RF Trimmer FC-2	

Abgleich Tuner MIDI 2264/2270
Alignment procedure tuner MIDI 2264/2270

4

FM

STEP	CONNECT SIGNAL SOURCE TO –	CONNECT OUTPUT INDICATOR TO–	SET SIGNAL GR INSERT MARKER	SET RADIO DIAL TO	ADJUST	ADJUST FOR
9	Repeat steps 5 through 8 as necessary to obtain maximum sensitivity .					

Abgleich Cassette MIDI 2264/2270
Alignment procedure cassette MIDI 2264/2270

Instrument required
1. Audio signal generator
2. Audio attenuator (600 Ohm)
3. Dual trace oscilloscope
4. Dual trace AC millivolt meter
5. Frequency counter

Adjustment
1. Playback

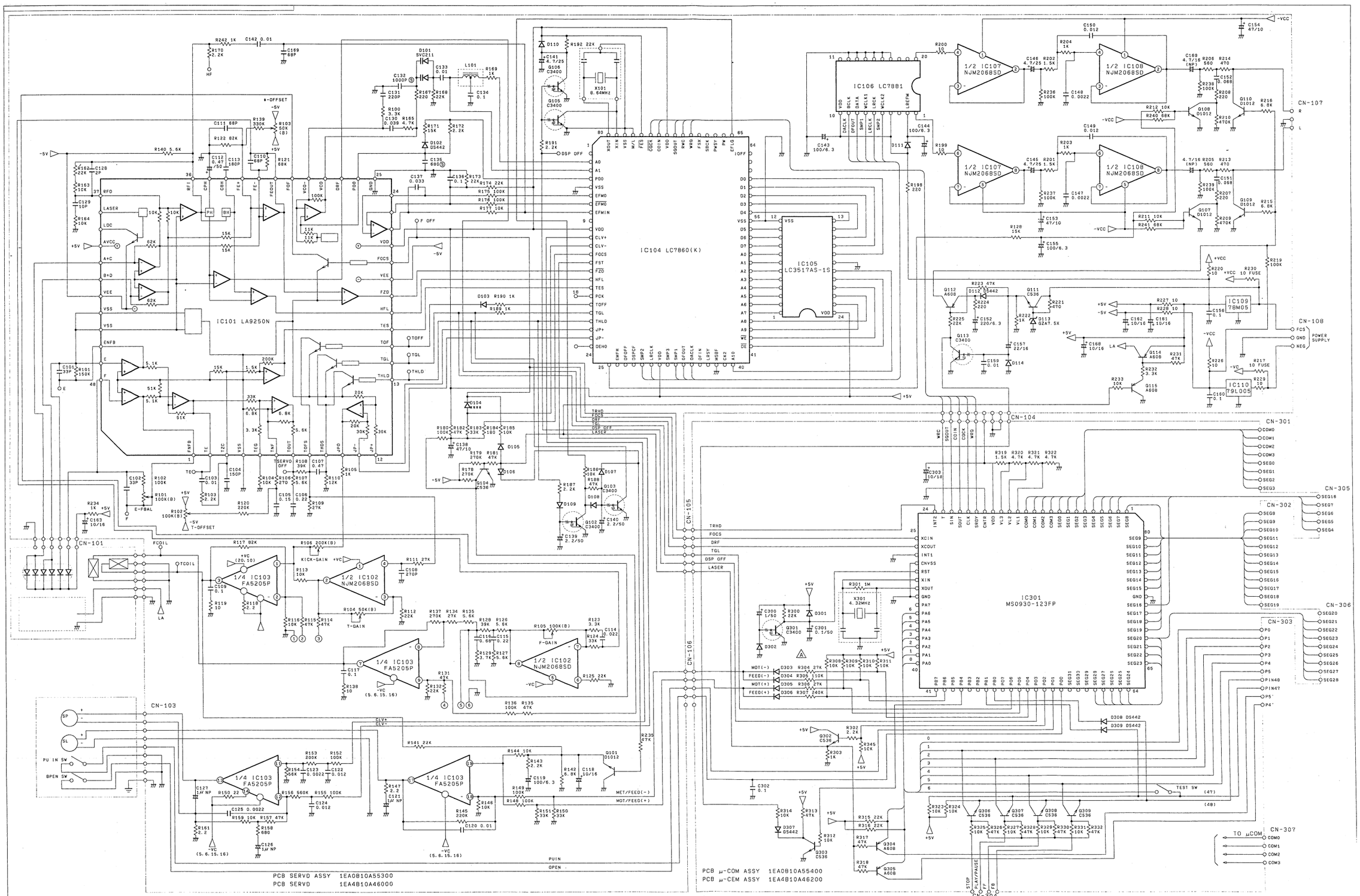
Step		Measuring Instrument Arrangement	Test tape	Adjust Point	Adjustment
1.	Azimuth	Take out the signal from loudspeaker socket L and R	MTT-114 (10 kHz–10 dB)	R/P head	Adjust to maximum output
2.	Tape NOR Speed		MTT-111 (3 kHz–10 dB)	SFR 402	Adjust to 3 kHz + 3/–2% at Frequency counter display
3.	High Speed			SFR 401	Adjust to 4.8 kHz + 3/–2% at Frequency counter display

Step		Measuring Instrument Arrangement	Output Point	Output Point	Adjustment
1.	Bias Frequency	Frequency counter connect to erase head wire pin	Erase head wire pin	L-401	85 kHz (+/-5 kHz)

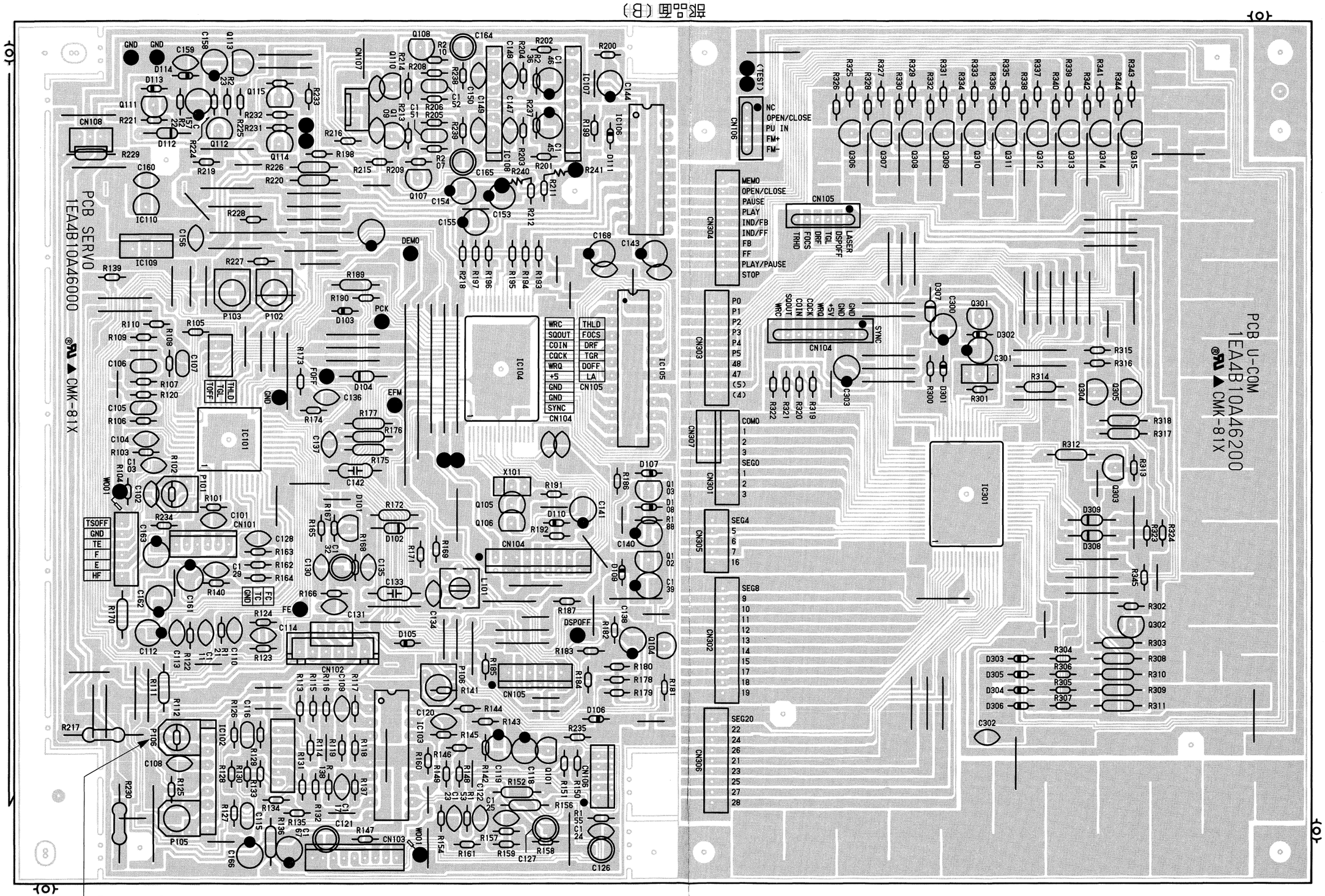
Löschspannung: ca. 130 Vss

Vormagnetisierung: ca. 30 Vss

Schaltbild CD-Hauptplatine MIDI 2264/2270
Schematic diagram Main P.C.B. MIDI 2264/2270

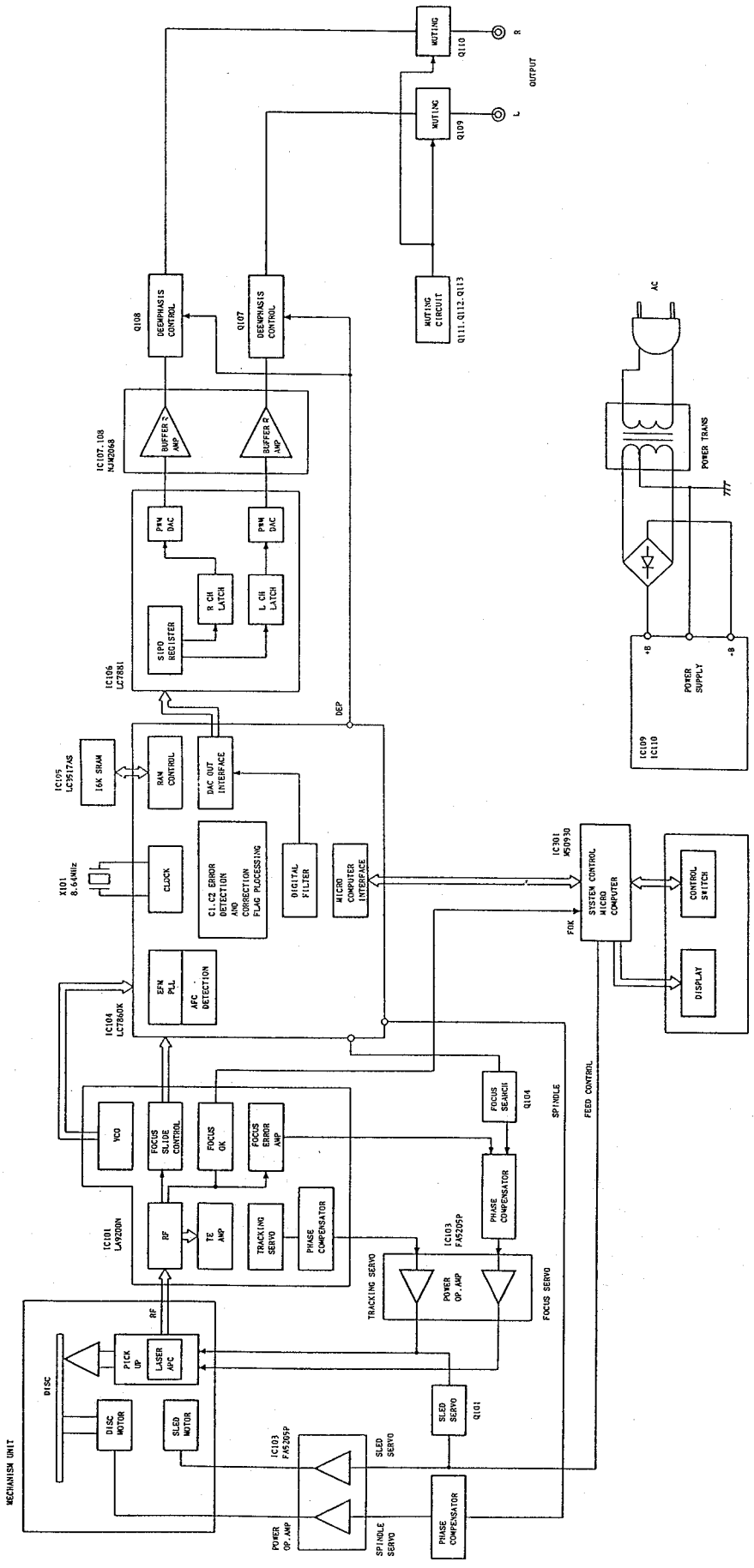


Platinendarstellung CD Hauptplatine MIDI 2264/2270
CD Main P.C.B. MIDI 2264/2270



P 104 – Siebdruck auf Platine falsch (50 kΩ)
P 104 – Screen printing on PCB is wrong (50 kΩ)

Blockschaltbild CD
Functional block diagram CD



Abgleichanweisung CD Spieler

Benötigte Meßgeräte:
-Frequenzzähler
-Test CD Philips 5A
-Oszilloskop
-DC Voltmeter

Frequenzabgleich
1. TP DSPOFF (bzw. Drahtbrücke zwischen DSPOFF und R 182) mit Masse verbinden.
2. Frequenzzähler an TP PCK (IC 104 Pin 18) und Masse anschließen.
3. Mit Spule L101 auf 4,3218 MHz ± 10 kHz abgleichen.
4. Verbindung DSPOFF mit Masse lösen.

Fokusabweichung
1. TP FOFF (bzw. Kathode von D 104) und Masse verbinden.
2. Entweder Oszilloskop oder DC Voltmeter (hohe Eingangsimpedanz) zwischen TP FC (Steckverbinder CN 102) und Masse anschließen.
3. Mit P103 auf 0V ± 10mV abgleichen.
4. Verbindung FOFF mit Masse lösen.

Spurabweichung
1. TP TOFF (bzw. Kathode von D 103) und Masse verbinden.
2. Entweder Oszilloskop oder DC Voltmeter zwischen TP TC (Steckverbinder CN 102) und Masse anschließen.
3. Mit P102 auf +170 - 200 mV abgleichen.
4. Verbindung TOFF mit Masse lösen.

EF-Balance-Abgleich
1. CD-Platte einlegen und Play-Taste drücken.
2. Oszilloskop an TP HF (bzw. an R 170, Anschluß neben TP HF) und Masse anschließen.
3. HF-Signal mit P101 auf Maximum abgleichen.

Alignment procedure CD player

Instruments required:
-Frequency counter
-Test disk Philips 5A
-Oscilloscope
-DC voltmeter

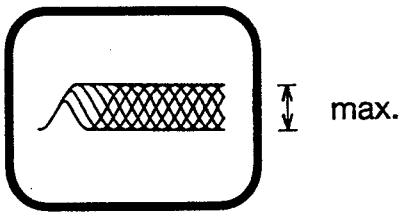
VCO frequency adjustment
1. Connect TP DSPOFF (or wire connector between TP and R 182) to ground.
2. Connect frequency counter to TP PCK (IC 104 pin 18) and ground.
3. Adjust L101 so that the value of the frequency counter comes within 4,3218 MHz ±10kHz.
4. Disconnect DSPOFF and ground.

Focus offset adjustment
1. Connect TP FOFF (or cathode of D104) and ground.
2. Connect either an oscilloscope or a DC voltmeter(high impedance type) between TP FC (Connector CN 102) and ground.
3. Adjust P103 until the voltage comes to 0V ±10mV.
4. Disconnect FOFF and ground.

Tracking offset adjustment
1. Connect TP TOFF (or cathode of D103) and ground.
2. Connect either an oscilloscope or a DC voltmeter(high impedance type) between TP TC (Connector CN 102) and ground.
3. Adjust P102 until the voltage comes within +170 - 200 mV.
4. Disconnect TOFF and ground.

EF-Balance adjustment
1. Load a disk and play back.
2. Connect an oscilloscope to TP HF (or R170, junction near TP HF) and ground.
3. Adjust P101 so that the HF-Signal becomes maximum.

The screen of oscilloscope



ca. 2,5 Vss mit Test CD Philips 5A

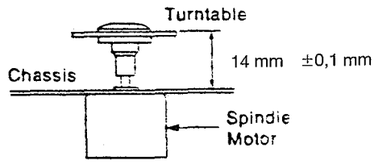
about 2,5 Vpp with Testdisk Philips 5A

Fokus-Servo-Verstärkung
(Einstellung von Fokus und Spurführungsverstärkung P104, P105, P106).
Für genauen Abgleich ist ein Servo-Analysator erforderlich. Jedoch besteht bei Normalbetrieb auch dann keine Schwierigkeit, wenn eine geringe Abweichung von den zulässigen Werten auftritt, da die Verstärkung in einem gewissen Bereich variieren kann.
Deswegen sollte dieser Abgleich nicht ausgeführt werden. Mit der Fokus- und Servoverstärkung werden Nachführeigenschaften des Abtasters bei mechanischen Erschütterungen und Stößen während des Betriebs beeinflußt.

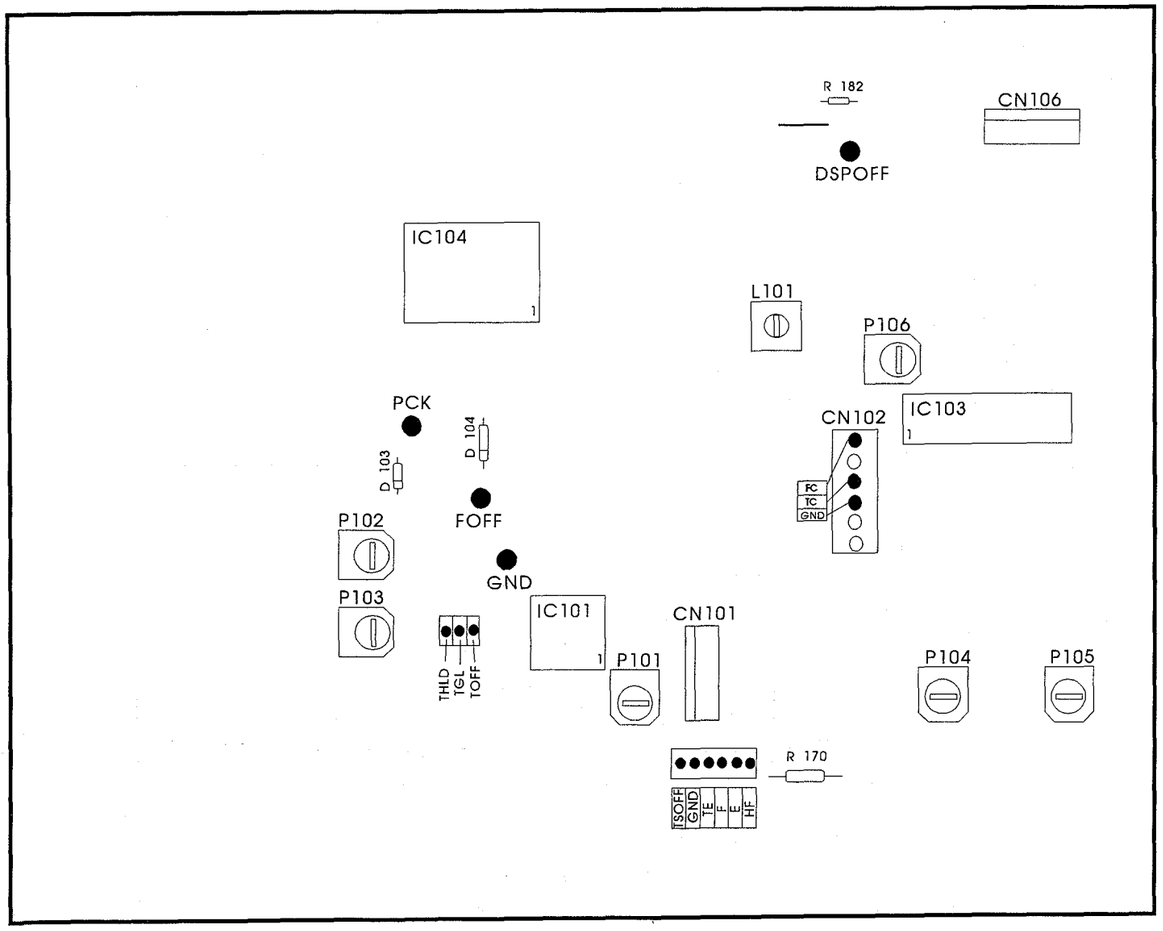
Focus servo gain adjustment
(Focus/Tracking-gain adjustment P104, P105, P106).
A servo-analyzer is required for accurate adjustment. However, there will be no problem in normal operation even in case of a minor drift from precise adjustment because the gain has an allowable margin.
Therefore, do not apply this adjustment.
The Focus/Tracking-gain determines the tracking property of the pick-up against the mechanical noise and mechanical shock during the operation.

Antriebstellerhöhe
Diese Einstellung ist notwendig, wenn der Antriebstellermotor gewechselt wird.
Der Antriebsteller muß so befestigt werden, daß der Abstand zwischen Oberkante Teller und Chassis 14,00 mm ±0,1 mm beträgt.

Adjustment of turntable height
This adjustment must be performed when the Spindle Motor is replaced.
The turntable should be mounted so that its upper surface is 14,00 mm ±0,1 mm above the surface of the chassis.



Abgleichpunkte
Adjustment locations



IC Spannungstabelle CD
IC voltage assertions CD

CDKM87CP

		IC PIN NUMBERS DC VOLTAGES																			
Ref.No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC101	LA9200N	0V	0V	0.3V	0V	0V	0V	0V	0V	0V	0V	0.6V	0.6V	0V	4.9V	4.4V	4.3V	4.2V	4.2V	-5.6V	2.4V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		5.0V	2.7V	2.3V	2.3V	0V	2.4V	0V	2.5V	2.4V	0V	0V	0.6V	0.6V	0V	-0.2V	0V	0V	10.0V	4.5V	5.9V
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		0V	0V	-5.6V	0V	0V	0V	0V	0V	-	-	-	-	-	-	-	-	-	-	-	-

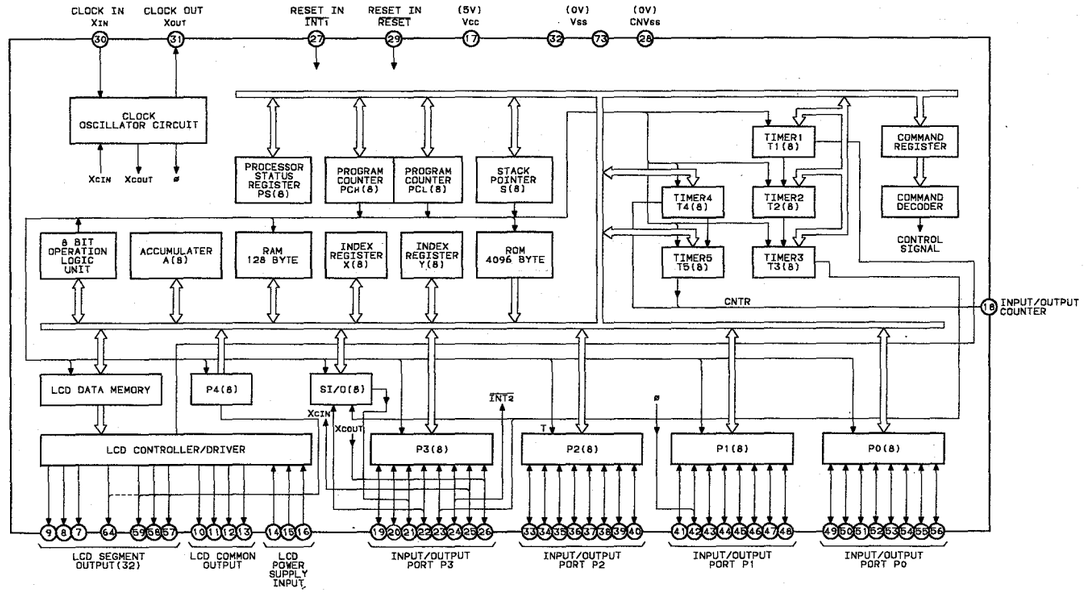
		IC PIN NUMBERS DC VOLTAGES																			
Ref.No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC104	LC7860K	0V	2.6V	2.6V	2.4V	0V	2.4V	2.2V	2.7V	0V	5.0V	0.8V	0V	0.2V	0.2V	4.2V	4.2V	4.3V	0V	2.7V	4.9V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		0V	0.6V	0.6V	0V	0V	0V	1.1V	0V	5.0V	5.0V	5.0V	0V	5.0V	5.0V	0V	0V	5.0V	0V	0V	5.0V
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		5.0V	5.0V	0V	0V	5.0V	5.0V	5.0V	5.0V	0V	5.0V	5.0V	0V	0.8V	0.8V	0.8V	0V	2.4V	2.4V	2.4V	2.4V
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
		2.4V	0.6V	0.6V	0.6V	0V	5.0V	0V	0.7V	0V	0V	0V	5.0V	5.0V	0V	5.0V	0V	0V	0V	0V	5.0V

		IC PIN NUMBERS DC VOLTAGES																			
Ref.No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC106	LC7881	2.6V	5.2V	0V	5.2V	5.0V	5.0V	5.0V	0V	0V	5.2V	2.5V	0V	0V	0V	0V	0V	0V	3.5V	0V	2.6V
IC103	FA5205P	0V	0V	0V	-8.5V	-8.5V	-8.5VV	0V	0V	0V	8.5V	0V	0V	0V	-8.7V	-8.7V	-8.7V	0V	0V	0V	8.5V
IC107	NJM2068S	5V	2.1V	2.1V	2.1V	-5V	2.1V	2.1V	5V												
IC108	NJM2068S	5V	0V	0V	0V	-5V	0V	0V	0V												
IC109	78M05	12.5V	0V	5.0V																	
IC213	79L005	0V	9V	-5V																	
IC105	LC3517AS	5.0V	5.0V	5.0V	5.0V	0V	5.0V	5.0V	0V	0.8V	0.8V	0.8V	0V	2.4V	2.4V	2.4V	2.4V	2.4V	0V	5.0V	5.0V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		5.0V	0V	0V	5.0V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

		IC PIN NUMBERS DC VOLTAGES																			
Ref.No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC301	M50930	0V	2.4V	2.4V	2.4V	2.4V	2.4V	2.4V	2.4V	2.4V	2.4V	2.4V	2.4V	2.4V	1.6V	3.2V	4.9V	5.0V	0.2V	0V	5.0V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	37	39	40
		0V	0V	0V	0V	0V	0V	0.6V	0V	5.0V	2.2V	1.9V	0V	5.0V	5.0V	5.0V	5.0V	5.0V	5.0V	5.0V	4.9V
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		0V	0V	4.9V	4.9V	0V	0V	4.7V	4.8V	4.9V	4.9V	0V	0V	4.9V	4.8V	5.0V	0V	2.4V	2.4V	2.4V	2.4V
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
		0V	2.4V	2.4V	2.4V	0.8V	2.4V	0.8V	2.4V	2.4V	2.4V	2.4V	2.4V	0V	2.4V	2.4V	2.4V	2.4V	2.4V	2.4V	2.4V

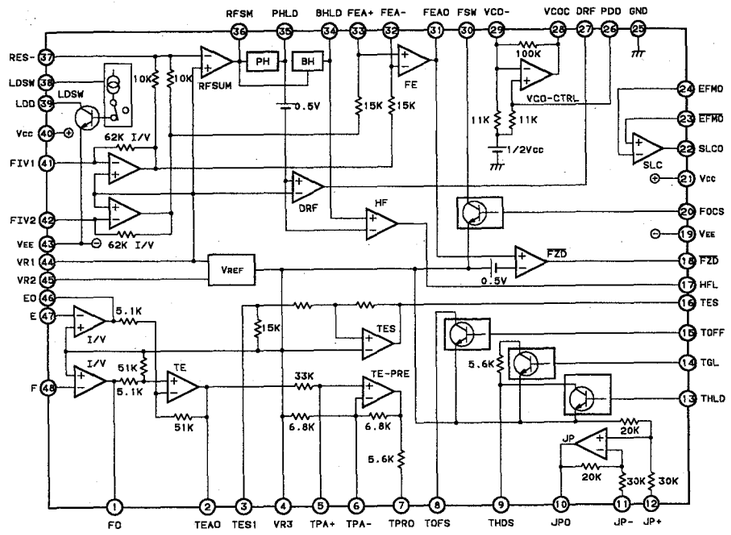
IC Blockschaltbilder CD
IC block diagrams CD

M50930-123FP BLOCK DIAGRAM

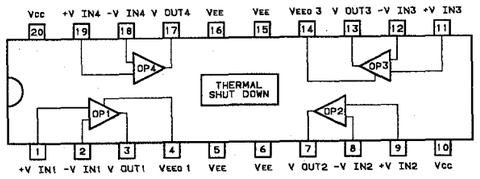


IC Blockschaltbilder CD
IC block diagrams CD

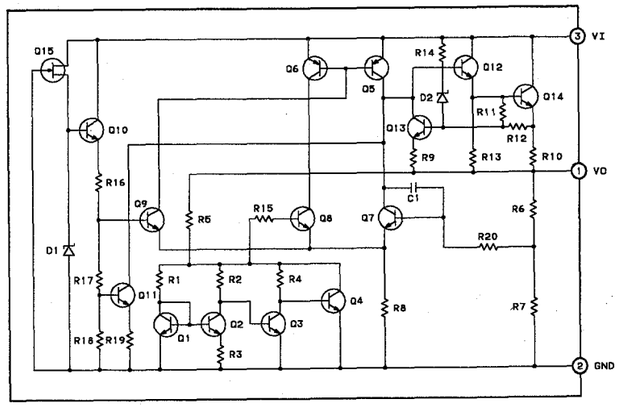
LA9200NM


RFSM PHLD BHLD FEA+ FEA- FEAO FSW VCO- VCOC DRF PDO GND
RES- LDSW LDD Vcc FIV1 FIV2 VEE VR1 VR2 EO E F
EFMO EFMO SLCO Vcc FOCS VEE FZD HFL TES TOFF TGL THLD
RFSUM PH BH FE SLC VCO-CTRL DRF HF FZD VREF
100K 10K 62K I/V 15K 11K 1/2Vcc 0.5V 5.1K TE TES TE-PRE 33K 6.8K 5.6K 20K 30K
FO TEAO TES1 VR3 TPA+ TPA- TPRO TOFS THDS JPO JP- JP+

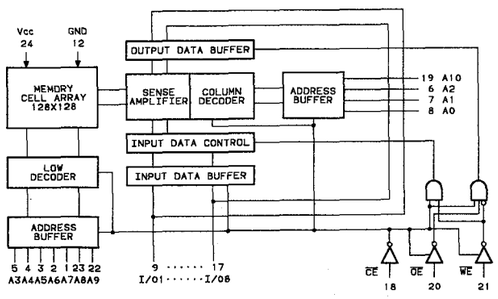
FA5205P


Vcc +V IN4 -V IN4 V OUT4 VEE VEE VEEO 3 V OUT3 -V IN3 +V IN3
20 19 18 17 16 15 14 13 12 11
OP4 OP3 OP1 OP2
THERMAL SHUT DOWN
1 2 3 4 5 6 7 8 9 10
+V IN1 -V IN1 V OUT1 VEEO 1 VEE VEE V OUT2 -V IN2 +V IN2 Vcc

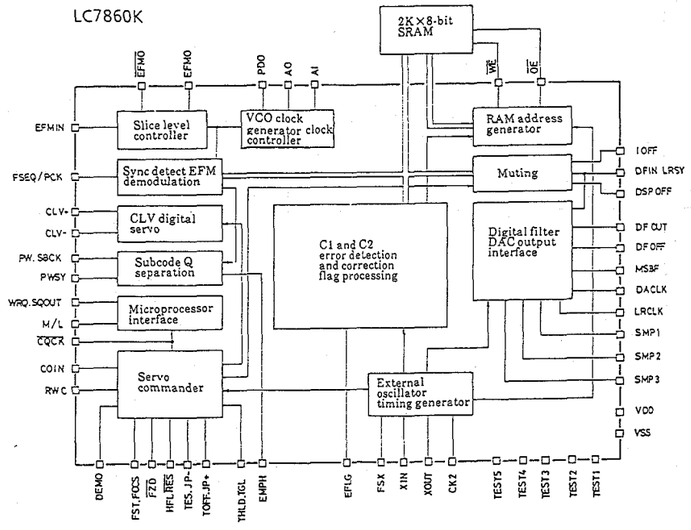
NJM78M05A



LC3517BS-15

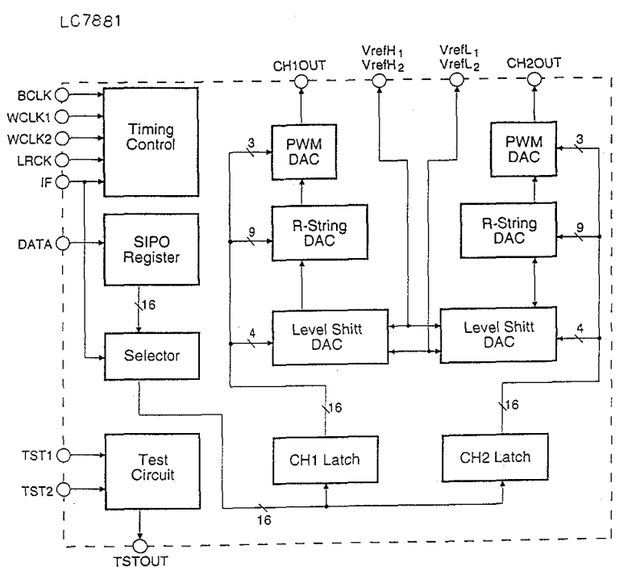


LC7860K

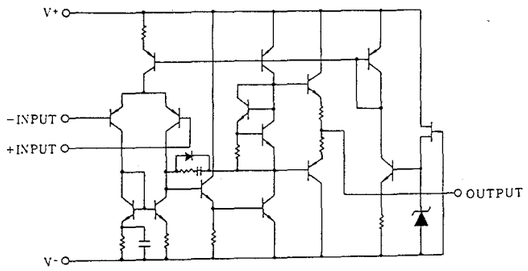

2K×8-bit SRAM
EFMO EFMO PDO AO AI WE OE
EFMIN FSEQ/PCK CLV+ CLV- PW.SBCK PWSY WRQ.SQOUT M/L COCR COIN RWC
Slice level controller
VCO clock generator clock controller
Sync detect EFM demodulation
CLV digital servo
Subcode Q separation
Microprocessor interface
Servo commander
C1 and C2 error detection and correction flag processing
RAM address generator
Muting
Digital filter DAC output interface
External oscillator timing generator
IOFF DFIN LRSY DSP OFF DF OUT DF OFF MSBF DACLK LRCLK SMP1 SMP2 SMP3 VDD VSS
DEMO FST.FOCS FZD HFLRES TES.JP- TOFF.JP+ THLD.TGL EMPH EFLG FSX XIN XOUT CK2 TEST5 TEST4 TEST3 TEST2 TEST1

IC Blockschaltbilder CD
IC block diagrams CD

LC7881



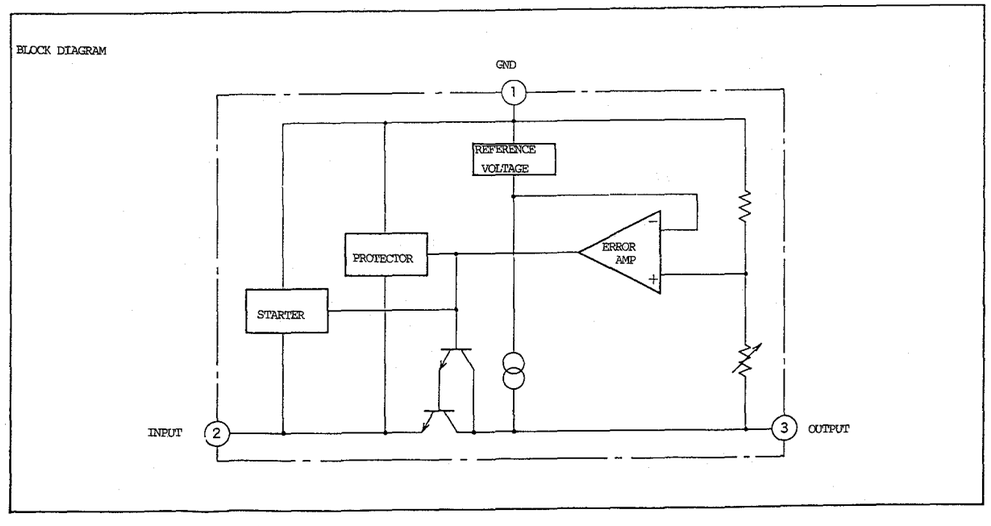
NJM2068S



M5279LXX

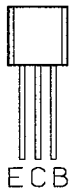
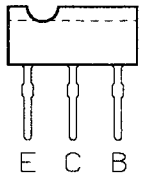
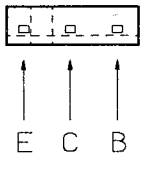
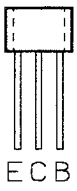
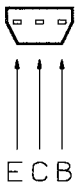
M5279L**XX**
└ VALUE FOR OUTPUT VOLTAGE

TYPE NO.	MARKING	OUTPUT VOLTAGE
M5279L05	79L05	5V
M5279L06	79L06	6V
M5279L09	79L09	9V
M5279L12	79L12	12V
M5279L15	79L15	15V

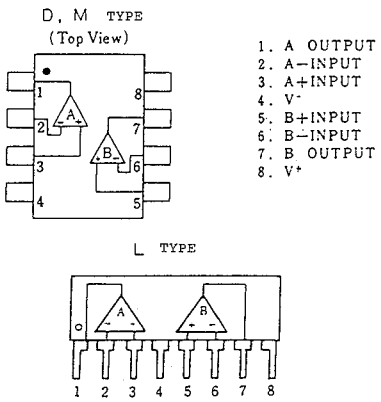


IC- und Transistor-Anschlußbelegung CD

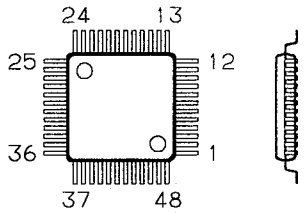
IC and transistor pin location CD

TRANSISTOR	FRONT VIEW	BOTTOM VIEW	TRANSISTOR	FRONT VIEW	BOTTOM VIEW
2SA608 2SC536			DTA144		
2SC3400 2SC3860 2SD1012					
TERMINAL NAME					
B → BASE C → COLLECTOR E → EMITTER					

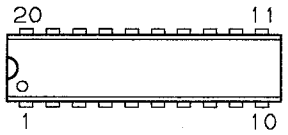
NJM 2068 S



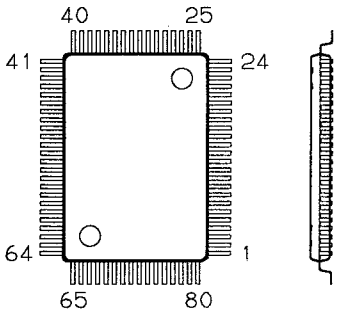
LA9200NM TOP/SIDE VIEWS



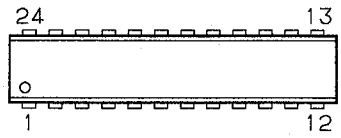
FA5205P TOP VIEW
LC7880 TOP VIEW



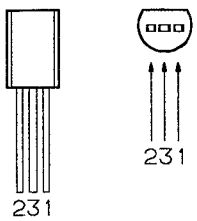
LC7860J TOP/SIDE VIEWS
M50930-123FP TOP/SIDE VIEWS



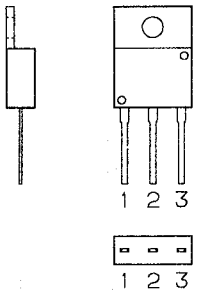
LC3517BS-15 TOP VIEW



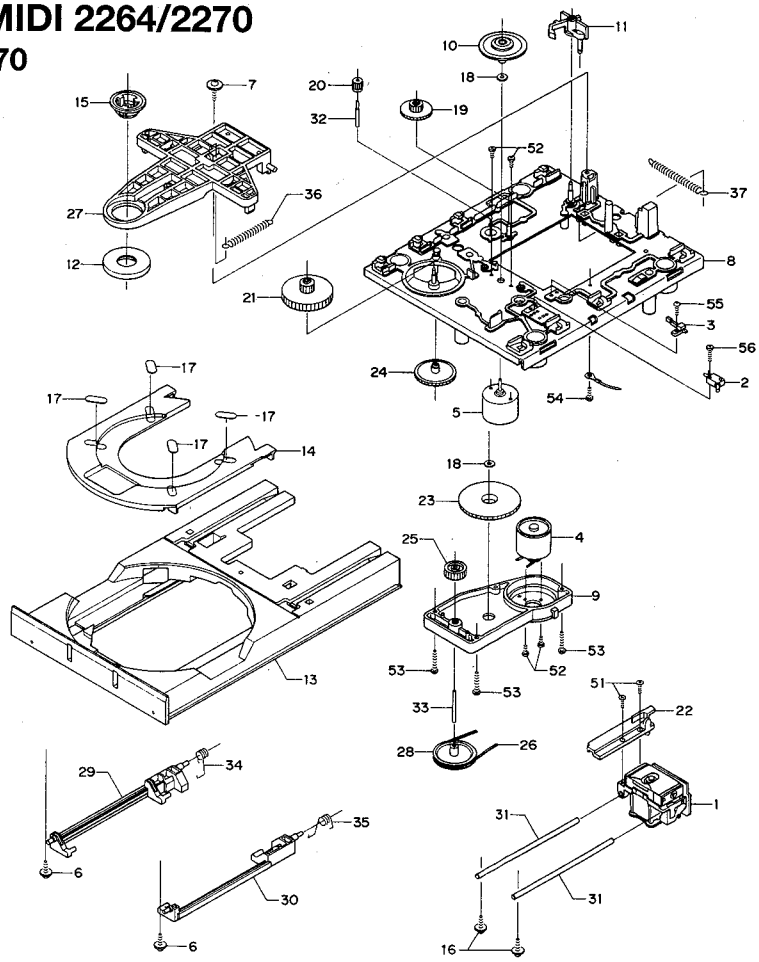
TA78L006AP FRONT/BOTTOM VIEWS
TA79L006P FRONT/BOTTOM VIEWS



NJM78M05A TOP/SIDE VIEWS



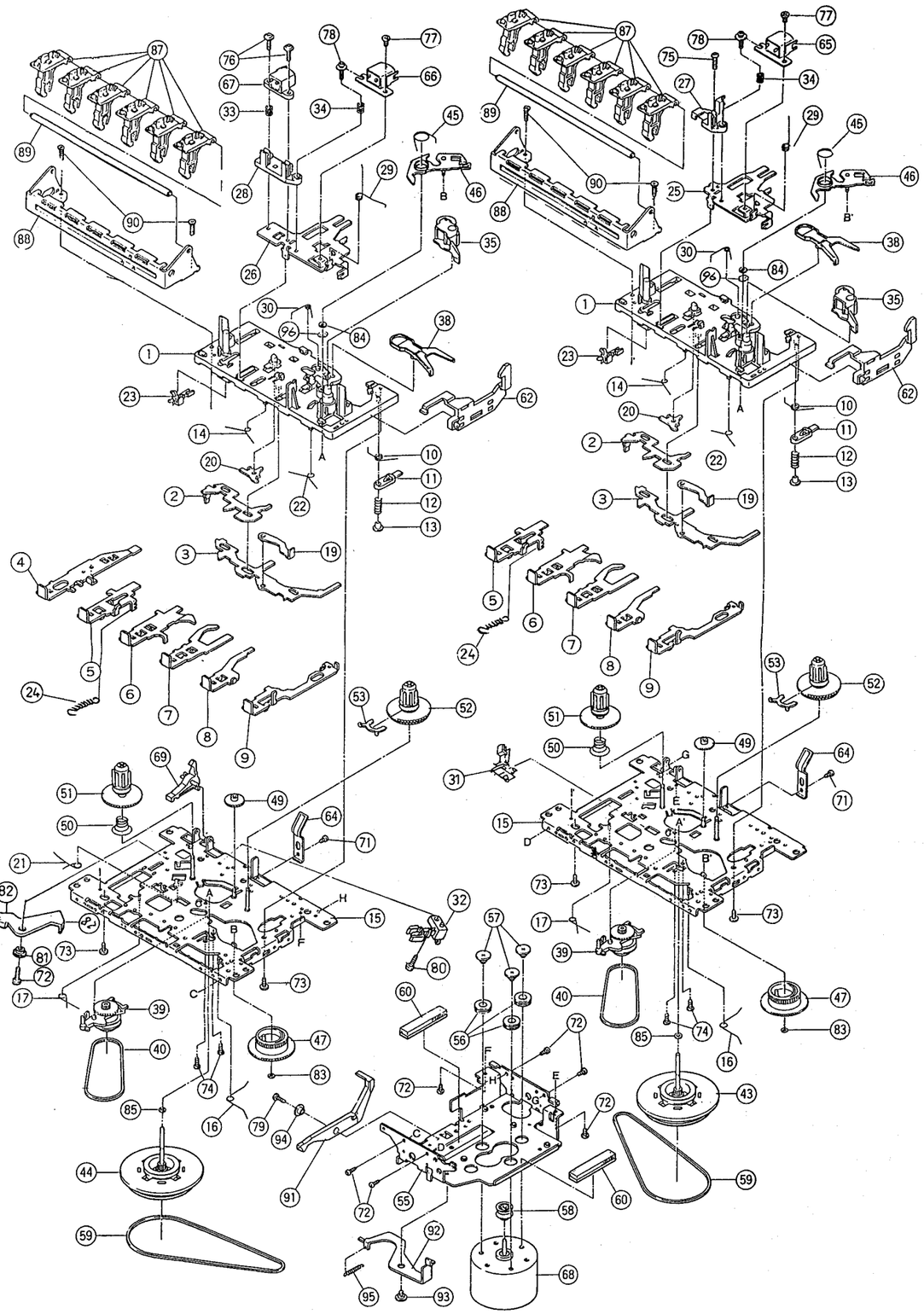
Explosionsdarstellung CD-Mechanik MIDI 2264/2270
Exploded view CD mechanism MIDI 2264/2270



Ersatzteilliste CD-Spieler MIDI 2264/2270
Spare parts list CD player MIDI 2264/2270

Bestell-Nr./ Part.-No.	Bezeichnung	Description	Position	Preisgruppe/ Price-key
65 542 00	CD-Mechanik	CD mechanism		F 5
65 541 00	CD-Hauptplatine	CD main P.C.B.		G 0
65 794 00	Laserabtaster kpl.	Pickup assembly	CD 1	F 1
60 336 00	Schalter (Hebel)	Lever switch 1 pit	CD 2	A 8
60 337 00	Mikroschalter	Leaf switch	CD 3	A 8
60 338 00	Motor Laser + Schlitten	Motor	CD 4	C 6
60 339 00	Motor Disk	Motor	CD 5	C 6
60 340 00	Antriebsteller	Turntable assembly	CD 10	B 3
60 341 00	Rasthebel für Laser	Arm assembly	CD 11	A 8
60 342 00	Niederhalter kpl.	Flap disc cramp assembly	CD 12 + 15 + 27	C 1
60 343 00	Schlitten kpl.	Table CD assembly	CD 13, 14, 17, 29, 30 + 34	D 1
60 344 00	Zahnrad Laser	Gear pickup	CD 19	A 3
60 345 00	Zahnrad	Gear motor	CD 20	A 3
60 346 00	Zahnrad Schlitten	Gear table load	CD 21	A 4
60 347 00	Zahnschiene Laser	Gear pickup rack	CD 22	A 4
60 348 00	Zahnrad Lademechanik groß	Gear load up	CD 23	A 6
60 349 00	Zahnrad Ledemechanik klein	Gear load T. L.	CD 24	A 4
60 350 00	Zahnrad Pulley	Gear	CD 25	A 4
60 351 00	Riemen	Belt	CD 26	A 6
60 352 00	Pulley	Pulley	CD 28	A 4
60 353 00	Gleitstange Laser	Shaft pickup	CD 31	A 9
60 354 00	Feder Niederhalter	Spring flap disc cramp	CD 36	A 3
60 355 00	Feder Rasthebel Laser	Spring arm	CD 37	A 3
48 407 00	IC LA 9200 NM	IC LA 9200 NM	IC 101	C 6
48 411 00	IC NJM 2068 S-D	IC NJM 2068 S-D	IC 102, 107 + 108	A 9
60 357 00	IC FA 5205 P	IC FA 5205 P	IC 103	C 7
48 408 00	IC LC 7860 K	IC LC 7860 K	IC 104	D 9
45 036 00	IC LC 3517 BS-15	IC LC 3517 BS-15	IC 105	C 0
45 316 00	IC LC 7881	IC LC 7881	IC 106	C 5
65 795 00	IC NJM 78 M 05 A	IC NJM 78 M 05 A	IC 109	B 3
65 796 00	IC M 5279 L 05	IC M 5279 L 05	IC 110	B 2
60 358 00	IC M 50930-123 FP	IC M 50930-123 FP	IC 301	D 6
40 366 00	Transistor 2 SD 1012-G-SPA	Transistor 2 SD 1012-G-SPA	Q 107-110	A 3
48 415 00	Transistor 2 SC 3400	Transistor 2 SC 3400	Q 102, 103, 105, 106 + 113	A 2
65 797 00	Transistor 2 SC 536-G-NP-AA	Transistor 2 SC 536 G-NP-AA	Q 104, 306, 311, 302+ 303	A 3
21 312 00	Transistor 2 SA 608-F-NP	Transistor 2 SA 608-F-NP	Q 112, 114, 115, 304 + 305	A 4
65 798 00	Oszillator 4,32 M	Ceramic oscillator 4.32 M	X 301	B 2

Explosionsdarstellung Cassettenmechanik MIDI 2264/2270
Exploded view cassette mechanism MIDI 2264/2270



Ersatzteilliste Gehäuse MIDI 2264
Spare parts list housing MIDI 2264

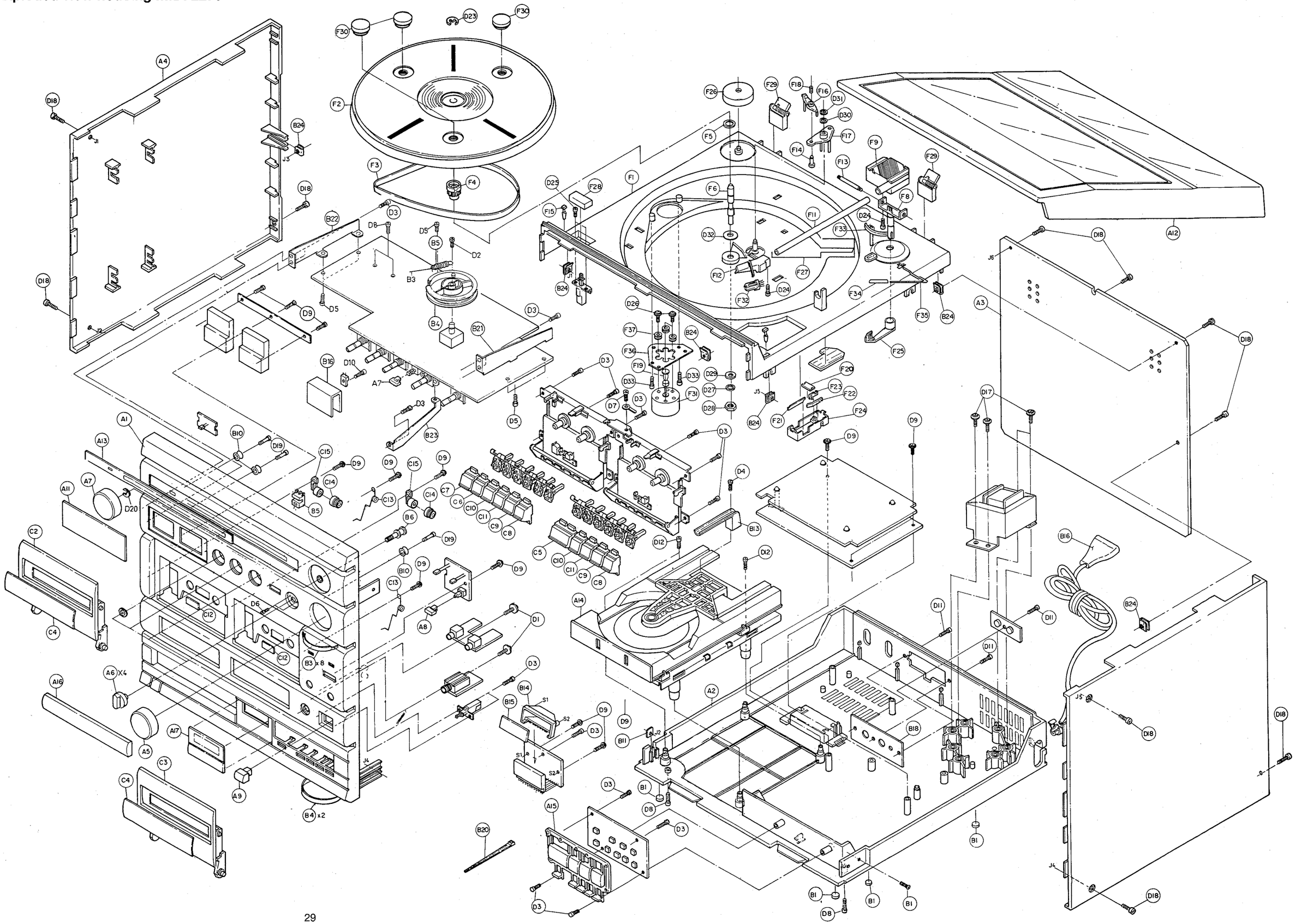
Bestell-Nr./ Part.-No.	Bezeichnung	Description	Position	Preisgruppe/ Price-key
65 475 00	Frontblende Midi 2264	Front panel	A 1	C 8
65 781 00	Gehäuseboden	Bottom chassis	A 2	C 3
65 544 00	Rückwand	Back board	A 3	B 2
65 782 00	Gehäuseseitenteil	Side panel	A 4	B 9
65 424 00	Drehknopf Volumen	VR knob	A 5	A 3
65 426 00	Drehknopf Balance	Balance knob	A 6	A 1
65 425 00	Drehknopf Tuning	Tuning knob	A 7	A 3
46 807 00	Drehknopf Hi-Speed/Mono Stereo	Hi-Speed/Mono Stereo knob	A 8	A 1
65 423 00	Netzschalterknopf	Power knob	A 9	A 2
65 483 00	Knopf Schieberegler	EQ VR knob	A 10	A 0
65 477 00	Abdeckfenster, LED Meter	LED meter window	A 11	A 6
65 478 00	Abdeckfenster Skala	Dial window	A 13	A 5
65 344 00	Tastensatz CD	CD preset button assembly	A 15	A 5
65 484 00	Abdeckblende CD-Schlitten	CD door	A 16	A 5
65 476 00	Abdeckfenster CD-Display	CD LCD window	A 17	A 8
65 437 00	Skalenanzeiger ohne LED	Dial pointer	B 5	A 1
65 421 00	Abstimmachse	Tuning shaft	B 6	A 1
65 799 00	Skalenseil	Dial string	B 7	A 2
65 436 00	Abstimmrad	Dial drum	B 8	A 3
29 899 00	Feder Abstimmrad	Dial drum spring	B 9	A 0
65 793 00	LCD-Anzeige CD kpl.	LCD display assembly	B 14 + 15	C 2
65 434 00	Kassettenfach (A)	Cass. case (A)	C 2	B 3
65 435 00	Kassettenfach (B)	Cass. case (B)	C 3	B 3
65 783 00	Kassettenfach Fenster	Cass. window	C 4	A 8
65 427 00	Klaviertaste Play (A)	Cass. key (A)	C 5	A 2
65 428 00	Klaviertaste Play (B)	Cass. key (B)	C 6	A 1
65 429 00	Klaviertaste Record	Cass. key (Rec.)	C 7	A 1
65 430 00	Klaviertaste Pause	Cass. key (Pause)	C 8	A 1
65 431 00	Klaviertaste Stop	Cass. key (Stop)	C 9	A 1
65 432 00	Klaviertaste Rewind	Cass. key (Rew.)	C 10	A 1
65 433 00	Klaviertaste Forward	Cass. key (F.F.)	C 11	A 1
65 420 00	Feder Kassettenfach	Cass. open spring	C 13	A 1
65 422 00	Dämpfer Kassettenfach + C 14	Cass. damper + C 14	C 15	A 2
37 813 00	Scharnier kpl.	SHS hinge assembly	F 29	B 0
65 539 00	Abdeckhaube	Dust cover	A 12	C 3

Ersatzteilliste Cassettenmechanik MIDI 2264/2270
Spare parts list cassette mechanism MIDI 2264/2270

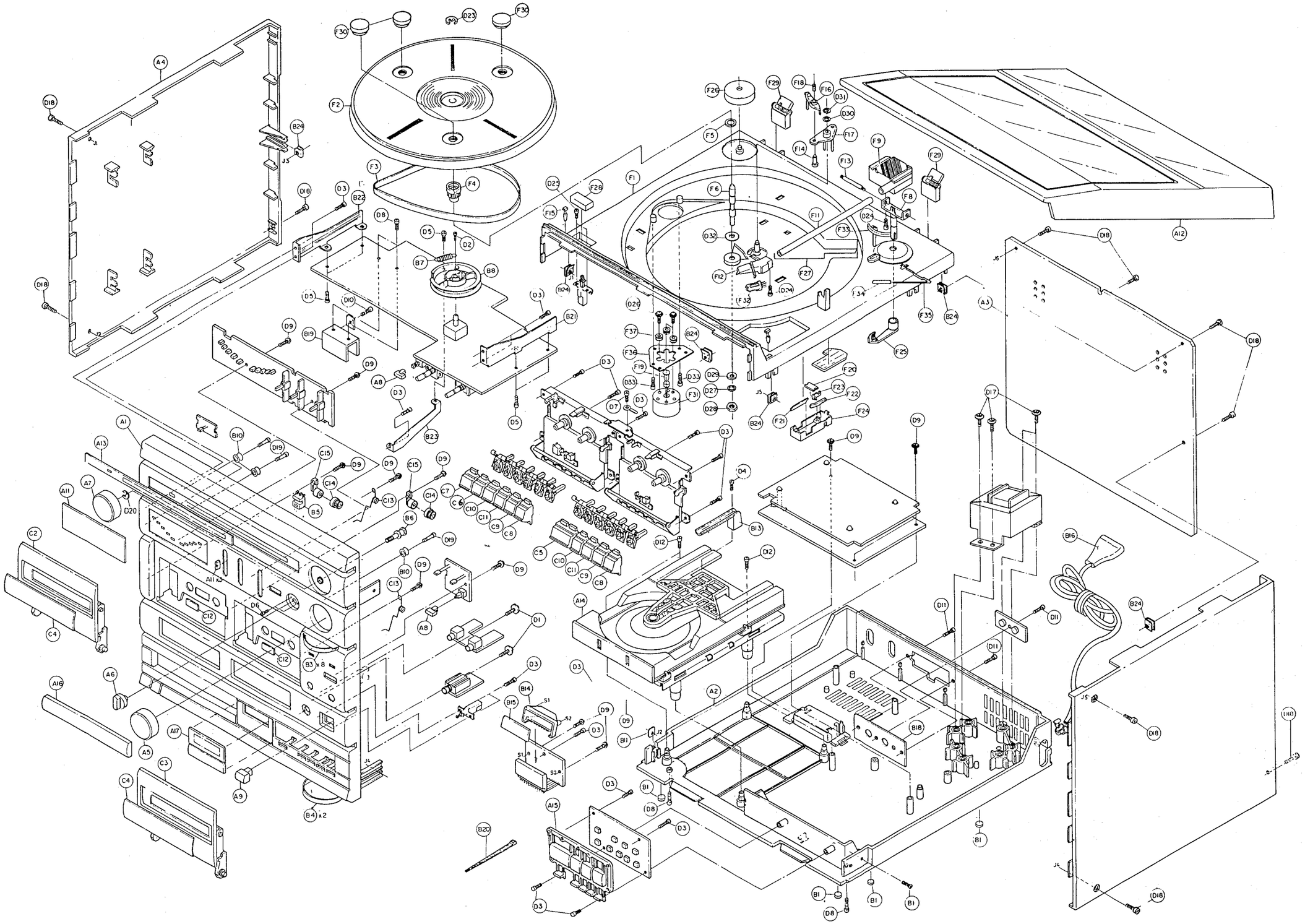
Bestell-Nr./ Part.-No.	Bezeichnung	Description	Position	Preisgruppe/ Price-key
65 773 00	Cassettenmechanik kpl.	Mechanism assembly	C 1	E 3
44 128 00	Feder Pauserasthebel	P control spring	CM 10	A 0
46 417 00	Pauserasthebel	Pause lever	CM 11	A 0
46 130 00	Druckfeder Pauserasthebel	Pause lever spring	CM 12	A 0
44 131 00	Sicherungsstöpsel Pause	Pause Stopper	CM 13	A 0
32 428 00	Feder Tastenhebel (Vor-, Rücklauf)	Button lever spring (A)	CM 14	A 3
46 864 00	Feder Aufnahmetaste	Rec. button lever spring	CM 21	A 0
32 423 00	Feder Tastenhebel (Stop, Pause)	Button lever spring (B)	CM 22	A 3
44 132 00	Mikroschalter MSW-1541 T	Leaf switch MSW-1541 T	CM 23	A 4
32 425 00	Feder Starthebel	Play button lever spring	CM 24	A 3
45 760 00	Feder Kopfträgerplatte	Panel P spring	CM 29	A 1
44 133 00	Mikroschalter MSW 17820 MVDO	Play SW MSW 17820 MVDO	CM 31	A 7
32 432 00	Feder Löschkopf	E-head spring	CM 33	A 3
32 435 00	Feder A/W-Kopf	Azimuth spring	CM 34	A 3
44 134 00	Bandandruckrolle kpl.	Pinch roller arm assembly	CM 35	A 6
44 135 00	Tasthebel Endabschaltung	Sensing lever	CM 38	A 1
44 137 00	Rutschkupplung kpl.	RF clutch assembly	CM 39	A 7
44 138 00	Riemen Rutschkupplung	RF belt	CM 40	A 4
46 866 00	Schwungmasse Play	Flywheel assembly	CM 43	B 7
46 865 00	Schwungmasse Record/Play	Flywheel assembly	CM 44	B 7
44 136 00	Kurvenzahnrad	Cam gear	CM 47	A 2
44 140 00	Zahnrad Vorlauf	FF gear	CM 49	A 1
44 319 00	Feder Wickelteller links	Back tension spring	CM 50	A 0
44 141 00	Wickelteller links	Supply reel assembly	CM 51	A 3
44 142 00	Wickelteller rechts	Takeup reel assembly	CM 52	A 4
46 436 00	Spange Wickelteller	Sensor	CM 53	A 1
32 453 00	Gummipuffer Motor	Motor rubber	CM 56	A 2
32 454 00	Schraube Motor	Motor collar screw	CM 57	A 2
44 778 00	Pulley	Motor pulley	CM 58	A 6
60 678 00	Antriebsriemen	Main belt	CM 59	A 7
46 418 00	Gleithebel Eject	Eject slide lever	CM 62	A 3
32 459 00	Cassettenandruckfeder	Pack spring	CM 64	A 5
65 774 00	Wiedergabekopf	P. head	CM 65	B 8
65 775 00	A/W-Kopf	R. P. head	CM 66	B 8
65 776 00	Löschkopf	E. head	CM 67	B 1
65 777 00	Motor	Motor	CM 68	C 4
32 451 00	Aufnahmesperrhebel	Record safety lever	CM 69	A 5
65 320 00	Tastenhebel	Operation lever	CM 87	A 2
65 321 00	Tastenrahmen mit Achse	Button frame (S)	CM 88	A 7

Explosionsdarstellung Gehäuse MIDI 2270

Exploded view housing MIDI 2270



Explosionsdarstellung Gehäuse MIDI 2264
Exploded view housing MIDI 2264



Ersatzteilliste Gehäuse MIDI 2270
Spare parts list housing MIDI 2270

Bestell-Nr./ Part.-No.	Bezeichnung	Description	Position	Preisgruppe/ Price-key
65 486 00	Frontblende Midi 2270	Front panel	A 1	C 8
65 781 00	Gehäuseunterteil	Bottom chassis	A 2	C 3
65 544 00	Rückwand	Back board	A 3	B 2
65 543 00	Gehäuseseitenteil	Side panel	A 4	B 8
65 424 00	Drehknopf Volumen	VR knob	A 5	A 3
65 426 00	Drehknopf Funktion	Functions knob	A 6	A 1
65 425 00	Drehknopf Tuning	Tuning knob	A 7	A 3
65 423 00	Netzschalterknopf	Power knob	A 9	A 2
46 807 00	Dubbing-Taste	Dubbing button	A 10	A 1
65 455 00	Anzeigeinstrument	Power Meter		C 3
65 487 00	Abdeckfenster Power Meter	Meter window	A 11	A 5
65 478 00	Abdeckfenster Skala	Dial window	A 13	A 5
65 344 00	Tastensatz CD	CD preset button assembly	A 15	A 5
65 484 00	Abdeckblende CD-Schlitten	CD door	A 16	A 5
65 476 00	Abdeckfenster CD-Display	CD LCD window	A 17	A 8
65 437 00	Skalenanzeiger ohne LED	Dial pointer	B 5	A 1
65 421 00	Abstimmachse	Tuning shaft	B 6	A 1
65 799 00	Skalenseil	Dial string	B 7	A 2
65 436 00	Abstimmrad	Dial drum	B 8	A 3
29 899 00	Feder Abstimmrad	Dial drum spring	B 9	A 0
65 793 00	LCD-Anzeige kpl. CD	LCD display assembly	B 14 + 15	C 2
65 434 00	Kassettenfach (A)	Cass. case (A)	C 2	B 3
65 435 00	Kassettenfach (B)	Cass. case (B)	C 3	B 3
65 783 00	Kassettenfachfenster	Cass. window	C 4	A 8
65 427 00	Klaviertaste Play (A)	Cass. key (A)	C 5	A 2
65 428 00	Klaviertaste Play (B)	Cass. key (B)	C 6	A 1
65 429 00	Klaviertaste Record	Cass. key (Rec.)	C 7	A 1
65 430 00	Klaviertaste Pause	Cass. key (Pause)	C 8	A 1
65 431 00	Klaviertaste Stop/Eject	Cass. key (Stop/Eject)	C 9	A 1
65 432 00	Klaviertaste Rewind	Cass. key (Rew.)	C 10	A 1
65 433 00	Klaviertaste Forward	Cass. key (F. F.)	C 11	A 1
65 420 00	Feder Kassettenfach	Cass. open spring	C 13	A 1
65 422 00	Dämpfer Kassettenfach + C 14	Cass. damper + C 14	C 15	A 2
37 813 00	Scharnier kpl.	SHS hinge assembly	F 29	B 0
65 539 00	Abdeckhaube	Dust cover	A 12	C 3

Ersatzteilliste Plattenspieler MIDI 2264/2270
Spare parts list player MIDI 2264/2270

Bestell-Nr./ Part.-No.	Bezeichnung	Description	Position	Preisgruppe/ Price-key
65 791 00	Gehäuseoberteil	Player board	F 1	C 1
46 420 00	Plattenteller	Turntable	F 2	C 0
24 025 00	Antriebsriemen	Belt motor	F 3	B 2
40 833 00	Endschalthülse Plattenteller	Pinion	F 4	A 3
40 823 00	Plattentellerachse	Spindle TT	F 6	A 6
46 426 00	Tonarm kpl.	Tonearm assembly	F 8-13	C 3
44 780 00	Endschalthebel kpl.	Stop plate assembly	F 14-18	B 2
46 421 00	Motorpulley	Motor pulley	F 19	A 3
40 830 00	Motorschalter kpl.	Switch motor assembly	F 20-24	A 7
40 831 00	Tonarmhebel	Control lever	F 25	A 3
03 460 00	Plattenpuck	45 rpm adaptor	F 26	A 2
69 792 00	Endschaltstange	Trip lever	F 27	A 1
37 979 00	Taste 33/45	Speed change knob	F 28	A 3
46 422 00	Auflagegummi Plattenteller	Gum cushion	F 30	A 2
46 423 00	Motor	Motor	F 31	C 5
46 424 00	System	Cartridge	F 32	C 0
46 425 00	Abtastnadel	Stylus		B 7
46 181 00	Tonarmlift	Lifter tonearm	F 33	A 2
46 182 00	Knopf Lifthebel	Cue knob	F 34	A 1
46 183 00	Lifthebel	Cue rod 2 C	F 35	A 2
21 403 00	Motorbefestigung	Gum bush	F 37	A 2
29 937 00	Sicherungsring Plattenteller	E ring	D 23	A 0
37 977 00	Druckschalter	Push switch		A 7

Bitte bei Ersatzteilbestellung die genaue Bezeichnung und **Ident-Nr. (siehe Typenschild)** des Gerätes sowie Bestell-Nummer und Positions-Nummer des Ersatzteils angeben.

For ordering of spare parts please state exact description and **ident.-no. of unit (see silver rating label on the backside of unit)** as well as part no. and position no. of required spare parts.

Benutzen Sie:

Bildschirmtext ∗ 317298 #

oder

Telefax: 08245/51326

Technische Änderungen vorbehalten.
Technical modifications reserved.

6580000 HD 6/5598/7000/08/92